

**Environmental Assistance to Small Businesses:  
An Ex-Post Evaluation of SBDC Pilot Projects**

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## **Executive Summary**

### **Background to SBDC Pollution Prevention Pilot Project**

In November 1993, the U.S. Small Business Administration (SBA) and the U.S. Environmental Protection Agency (EPA) signed a Memorandum of Understanding (MOU) for a cooperative effort to promote both economic growth and environmental compliance/pollution prevention through assistance to small businesses. To promote this vision, EPA provided funds to the SBA for grants to support the development of pilot environmental programs in state Small Business Development Centers (SBDCs), as well as directly supporting two state SBDC environmental pilot projects.

SBA funded four SBDC pilot projects (IA, TX, VA and WI), while EPA funded two projects directly (in PA and VT). The first of these projects began in early 1995; the last ended in late 1999. While the original design called for one-year pilots, the actual average length of the pilots (after extensions) was 2 1/3 years, with none shorter than 1 1/2 years.

### **Pilot Project Goal & Suggested Approaches**

The major goal of the projects was to involve SBDCs more actively in providing environmental assistance for the small businesses they serve--businesses which might not otherwise become aware of the potential financial or compliance benefits of pollution prevention approaches to meeting environmental objectives or requirements. EPA has undertaken the present study to assess the results of these projects, and to learn how the experience of these pilots might inform the design of future environmental assistance efforts.

The grant solicitation suggested a number of activities through which SBDCs could support the objectives of the pilot projects:

- technical and financial assistance for small business pollution prevention assessments and projects,
- financial and commercialization assistance for technology developers,
- development of marketing materials for SBDC environmental programs,
- compilation and dissemination of pollution prevention financing opportunities,
- development of pollution prevention educational curricula,
- development of a sector focuses important to the SBDC's service area and clientele, and
- development of P2 modules for incorporation into guidance for business development plans.

## State Pilot Project Activities

The SBDCs in the six states demonstrated a variety of approaches to the pilots, both in terms of activities and in terms of relationships with other environmental assistance providers in the states:

- Wisconsin's SBDC worked jointly with the state's primary pollution prevention technical assistance program, appointing the project director from that program, to develop a multi-sector pollution prevention handbook for SBDC counselors to use with their clients.
- Vermont's SBDC also developed close collaborative relationships with other environmental assistance providers, with a focus both on direct assistance and referrals to the other providers.
- The North Texas SBDC collaborated with two university extension programs to offer P2 training programs for both general business audiences and the electronics industry, and worked closely the state regulatory agency to disseminate compliance and pollution prevention information to dry cleaners.
- Pennsylvania's SBDC focused, during the grant, on providing direct compliance assistance to SBDC clients, and on building awareness of environmental assistance opportunities in the various state SBDC offices; with state funding support, the SBDC is now developing additional environmental assistance capabilities (both for direct assistance and referrals to other P2 technical assistance providers) in each of the state regulatory agency's six regions.
- In Iowa, environmental assistance to small businesses under the pilot project was principally provided by a university-based pollution prevention technical assistance provider, operating under a subcontract to the SBDC.
- Virginia attached individuals with environmental assistance responsibilities to local SBDCs in the eastern and western parts of the state, with no centralized planning and limited interaction (particularly in the eastern part of the state) with other pollution prevention assistance providers. The program in the eastern part of the state appears to have reached a very limited audience; the individual efforts of the project manager in the western part of the state were more successful both in reaching a larger audience and providing some on-site assistance.

Three of the SBDCs (Vermont, North Texas and Pennsylvania) established specialized environmental assistance units which have either expanded or continued the extent of their operations since the conclusion of the pilots. Wisconsin's unusual interactive arrangement between the SBDC and the state P2 technical assistance provider (both of which are part of the University of Wisconsin's Extension service) led to the development of a handbook which has been widely disseminated to other states, and to additional joint projects since the end of the original pilot. While there are some continuing program elements in both the Iowa SBDC and the Virginia SBDC, in neither case has a strong SBDC contribution to the states' environmental assistance efforts emerged from the original pilots.

## **Lessons Learned from Pilot Project Grants**

While all SBDCs provide a range of basic services for small businesses, the SBDC pilot pollution prevention grants supported programs in six significantly different situations, involving variations in relationships with other environmental providers, in the internal management of the environmental assistance effort, in the size of the state (or at least of the area covered by the SBDC), and in the priority assigned to the environmental assistance effort. The experiences of these pilots do not add up to a single prescription for success, but the evaluation identified several factors which could influence the success of current and future programs.

### **1. *The organizational structure for the environmental assistance function within the SBDC***

- It is important to establish leadership for the environmental assistance role in the SBDC. Preferably, there should be a single individual with responsibility for managing the SBDC environmental assistance effort for the entire state.
- Since SBDC counselors rarely come from environmental backgrounds, expectations for their active roles in providing environmental assistance should be limited. To make it as easy as possible for counselors to make small businesses aware of basic environmental needs and refer them to specialized counselors as needed, it is important to design materials and provide training for the counselors which is integral to standard business start-up and assistance counseling. It was also effective in the pilots to integrate the efforts of the environmental assistance specialists into the regular functions of the counselors.

### **2. *The scope and intensity of outreach***

The keys for the most successful outreach efforts in the pilot projects or subsequent follow-ons were targeting and extensive follow-up, including:

- identification of sectors which had pollution prevention opportunities, where the timing was opportune for considering P2 (e.g., current compliance issues), and where the types of companies corresponded to clients generally serviced by the SBDCs; and
- active outreach involving extensive contacts with either associations or individual facilities.

### **3. *The degree of collaboration with other environmental assistance providers***

- A cooperative relationship that recognizes and utilizes the services of all organizations capable of offering environmental assistance can be highly beneficial. In general, the pilots demonstrate the benefit of strong cooperative efforts and networks of providers which build on the strengths of each party.

- Comprehensive planning, which provided an opportunity to take into account roles and capabilities, was a key factor to effective networking and cooperative relationships in several pilots. . Providing for such planning efforts would be an important design element to consider in future efforts.

#### **4.     *Measurement of results***

A major impediment to a determination of what the pilot projects accomplished was the near absence of measurement of project results. This impediment was in turn underpinned by two factors: brevity of project life, and little or no prospect for follow-on funding. These projects were start-up efforts, and the initial funding was mostly designed for only one year. Since changes resulting from an assessment are often not immediate, it is extremely difficult to get a project up and running and to be in a position to assess results in such a short time-period. But for future development of programs involving the SBDCs, it would be important to focus on assessment of results, in order to be sure that expenditures are targeted on efforts that are likely to achieve the greatest benefit.

## Chapter One

### Promoting Pollution Prevention Technical Assistance for Small Businesses: SBDC Pilot Project Background

#### I. Initiation of Pilot Projects

On November 15<sup>th</sup>, 1993, the U.S. Small Business Administration (SBA) and the U.S. Environmental Protection Agency (EPA) signed a Memorandum of Understanding (MOU) to "ensure that the U.S. government effectively encourages, supports and enables U.S. small businesses to develop, market and/or adopt cost-effective environmental ... technologies to achieve economic growth and environmental compliance." As part of EPA's effort to promote this vision, the Agency provided funds to the SBA for grants to support the development of pilot environmental programs in state Small Business Development Centers (SBDCs). Specifically, the grants were to support SBDCs in developing and implementing multimedia pollution prevention technical and financial assistance programs for small businesses.

The 1994 SBA grant solicitation suggested seven types of activities through which SBDCs could support this objective:

- *Technical and financial assistance:* SBDCs could provide on-site pollution prevention assessments for small businesses, assist in finding sources of funding for pollution prevention technologies, and support small businesses in developing new markets.
- *Financial and commercialization assistance for technology developers:* SBDCs could assist small businesses in commercializing innovative pollution prevention technologies. This might include identifying sources of capitalization, as well as providing information on both efficiency and environmental compliance benefits.
- *Development of marketing materials for environmental programs:* SBDCs could develop brochures and other marketing materials to advertise both SBDC pollution prevention activities and the EPA -- SBA partnership.
- *Compilation and dissemination of pollution prevention financing opportunities:* SBDCs could compile information on available financing both for implementation of pollution prevention techniques and purchase of pollution prevention equipment, as well as on the most promising means to access such financial support.
- *Development of pollution prevention educational curriculum:* SBDCs could develop educational materials and training programs for both small businesses and for SBDC personnel. These materials could be made available for workshops, seminars or other training sessions, and should be developed in conjunction with other organizations that have specific pollution prevention expertise.



- *Development of a sector focus:* SBDCs should focus on particular industry sectors that are of importance to its service area. The SBDC might develop specialized expertise in pollution prevention approaches to industrial processes that are in widespread use in its service area, or it might seek to develop teams of experts—both financial and technical—to tackle how best to identify, finance and implement pollution prevention approaches in a particular sector.
- *Development of a P2 module for incorporation into guidance for business development plans:* Guidance for business development plans generally includes sections on marketing, accounting, and financing. The goal of this effort would be to incorporate a similar module for pollution prevention as part of the basic business development planning process. The module would include case studies, information on environmental compliance, and other information of specific interest to the selected business sectors.

In addition, the solicitation emphasized the importance of a collaborative effort in which the SBDCs would work cooperatively with other providers of pollution prevention technical assistance for small businesses in the state. The solicitation did not require that each applicant propose all seven types of activities. Rather, applicants were to propose those activities most appropriate to their specific circumstances.

Twenty states applied for the SBA pilot project grants. SBA and EPA awarded grants to North , Texas (Dallas), Wisconsin, Virginia and Iowa.

EPA subsequently awarded two additional pilot project grants to SBDCs in Vermont and Pennsylvania. These two grants were awarded directly by the Agency, rather than through the SBA MOU.

This report is an examination of these pilot programs as proposed and as they actually performed. EPA was interested in learning how the experience of the pilots could help to make the current programs more effective. Specifically, the experience of the SBDC pilots contains information relevant for current multi-state efforts to promote collaborative approaches to the delivery of environmental and business assistance.

The information contained in this report is based on key documents, including proposals and progress reports from the pilot projects, and interviews (either by phone or in person) with individuals who were involved in the pilots in each of the states. The footnotes in each section identify key written materials and individuals who were contacted for information on, and assessments of, the accomplishments of the projects.

**Table 1: Environmental Assistance Budget**

<b>State</b>	<b>Federal Grant Money</b>	<b>Matching Funds</b>	<b>Total Amount</b>
Iowa*	\$200,000	\$50,000	\$250,000
Texas*	\$161,550	\$118,807	\$280,357
Virginia*	\$149,200	\$75,436	\$227,636
Wisconsin*	\$190,768	\$71,918	\$262,686
Pennsylvania**	\$196,792	\$9,840	\$206,632
Vermont**	\$154,675	\$89,460	\$244,135

Where: \* denotes states funded under the SBA grant

\*\* denotes states funded under EPA Office of Pollution Prevention and Toxics Grant

## **II. State Pilot Project Proposed Goals and Activities**

Each of the state SBDCs proposed programs appropriate to its local circumstances. The following two tables provide an overview of the proposals in relation to the suggested areas of activity in the solicitation. It is important to note that SBDCs, in addition to pursuing the specific recommended activities in the solicitation, often planned additional initiatives of their own, and these are summarized in the sections on the state program designs which follow the tables. In addition, there were substantial variations in the specific activities planned with respect to the broad categories outlined in the solicitation.

Both these tables and the following state-specific summaries refer to the initial state SBDC proposals. During the course of the grants, the SBDCs often made adjustments to their original plans; what was actually implemented will be discussed in a subsequent chapter. In some cases, the original project proposals specified that particular decisions would be made after initiation of the pilots. For example, three of the states did not specify as part of their original proposals which business sectors would be their primary focus during the pilots (see Table 3).

**Table 2: Overview of Initial SBDC Proposed P2 Small Business Support Activities**

<b>Program Activities</b>	<b>IA</b>	<b>PA</b>	<b>TX</b>	<b>VA</b>	<b>VT</b>	<b>WI</b>
<i>Technical and financial assistance</i>	X	X	X	X	X	X
<i>Financial and commercialization assistance for technology developers</i>	X		X			
<i>Development of marketing materials for environmental programs</i>	X		X	X	X	X
<i>Compilation and dissemination of pollution prevention financing opportunities</i>	X	X				X
<i>Development of pollution prevention educational curriculum</i>	X	X	X	X	X	X
<i>Development of a sector focus</i>	X		X	X	X	X
<i>Development of a P2 module for incorporation into guidance for business development plans</i>	X	X			X	X
<i>Other</i>		X	X			

Three of the six states projected in their proposals which sectors would be the focus of their efforts under the grants, while two of the others only stated their intention to identify sectors once work under the grants started. Even for those that identified sectors up-front, actual choice of sectors could be modified during grant implementation. One state, Pennsylvania, did not explicitly address the issue of sectors at all. The following table shows the original sector-focus plans.

**Table 3: Business Sectors Targeted for Environmental Assistance**

Type of Business	IA	TX	VA	WI	VT	PA
Printing and Publishing	X		X	X		
Metal Fabrication of Agricultural Products	X					
Vehicle Maintenance	X		X			
Machine Shops			X			
Textiles and Apparel			X			
Wood Products			X	X		
Furniture Manufacturing			X			
Electronic Equipment				X		
Plastics				X		
Industrial Machinery				X		
Metal Fabrication				X		
To Be Determined During the Grant Project Life		X			X	

#### **A. Iowa**

The Iowa SBDC received funding under the original Small Business Administration Grant in 1994; the project lead was the University of Northern Iowa SBDC. The project design called for a cooperative effort of the SBDC and the Iowa Waste Reduction Center (IWRC) in providing a practical approach to technical assistance, utilizing the combined experience of the two agencies. The geographic focus included the four SBDC regions in northeastern Iowa. Primary sectors for the pilot effort were the printing, metal fabrication (particularly agricultural products), and vehicle maintenance industries.

The goals of the pilot were:

- Address and reduce barriers to implementing pollution prevention in small businesses.

- Explore, expand and increase awareness of financing options for pollution prevention projects.
- Educate small businesses, lending institutions, and service providers on the benefits of pollution prevention related to their specific interests.

In order to achieve the objectives, the SBDC intended to initiate the following activities:

- Multi-media pollution prevention assistance provided by teams comprised of a member from the University of Northern Iowa SBDC and from IWRC who would assist businesses in a one-on-one format. The teams intended to develop specific Pollution Prevention Implementation Plans (PPIP) for the businesses and conduct a formal followup to each effort.
- Targeted assistance for equipment and services. The primary vehicle for this effort was to be a Pollution Prevention Conference and Vendor Show to be held at the end of the grant period.
- Developing of marketing materials for the pilot project. This would include an informational brochure highlighting the SBA-EPA relationship and the new services, materials promoting the availability of PPIPs for specific business sectors, and informational materials for lenders on pollution prevention and financing.
- Pollution Prevention counseling and training. The initiative would provide training for both lenders and businesses on the value of pollution prevention. A major component of the information for this training would focus on sector-specific PPIPs incorporating technical and financing options, financial benefits and implementation strategies derived from the past work of the IWRC. In addition, the SBDC and IWRC planned to hold a pollution prevention conference and vendor show to focus on how best to implement and finance pollution prevention approaches in a small business setting.
- Development of pollution prevention modules for business development plans for the three identified business sectors. These modules would contain information on costs and benefits of pollution prevention and the best financing options available. In addition, the pilot would also create a generic pollution prevention module for general small business clientele.

In order to carry out these activities, the SBDC planned to develop a project team consisting of the four directors of the SBDC regions and two IWRC staff members. This group would hold several planning sessions to develop a cross-referral system between the SBDC and IWRC so that they would be operating in concert with one another. They would explore financing options available to clients to conduct pollution prevention and would educate lenders on the value of the pollution prevention activities. They would also develop outreach materials for the SBDC audience.

The action plan for pollution prevention implementation was to focus on 28 small businesses in the four SBDC regions. The businesses would be selected from 42 potential clients in the three target sectors. The SBDC/IWRC team would conduct a review of the selected businesses and complete a report of their efforts. The team would deliver that report to the client, assist the client in securing financing, if necessary, and provide technical support for any pollution prevention improvements made. Finally, there would be a standard 6 month follow-up with each business.

## **B. Texas**

The Texas SBDC received funding from the Small Business Administration in 1994. The North Texas SBDC, with headquarters in Dallas and serving northeastern Texas, was the pilot project manager. The SBDC planned to use the pilot funding to develop a North Texas Environmental Assistance Center (NTEAC) to help small businesses integrate environmental considerations into their business management. Partners for this proposal were Texas A&M University Engineering Extension Service (TEEX), the University of Texas at Arlington Center for Environmental Research and Training (UTA-CERT), and the U.S. Department of Energy, Kansas City. These partners were to train and assist small businesses in the implementation of changes required to incorporate environmental considerations into their business operations.

The SBDC planned to hire an environmental professional commissioned to ensure that the following took place during the life of the program:

- disseminating current environmental information pertinent to small businesses,
- providing environmental counseling for small businesses,
- assisting small businesses in their manufacturing practices,
- facilitating the adoption of environmentally safe alternative practices,
- building a network through which major manufacturers could mentor small businesses on environmental issues, and
- training the small businesses on environmental regulations and issues.

The SBDC-led consortium planned to achieve these objectives through a combination of business seminars and on-site technical assistance. Specific activities for the first year included sector-specific meetings and a seminar on environmentally-conscious technology, covering both product and financing options. Additional environmental seminars were to be scheduled at the technology assistance center and the University of Texas at Arlington's Robotics Research Institute. The SBDC would also conduct marketing assessments to assist two companies in

commercializing environmental technologies, and choose three small electronic companies for on-site assessment.

### **C. Virginia**

The goal of Virginia's SBDC Pollution Prevention Assistance Program, also funded through the original SBA grants, was to build links with Virginia's existing pollution prevention programs and to provide pollution prevention information and technical assistance to Virginia's small businesses. Five types of businesses and manufacturers were targeted for assistance: auto repair shops, machine shops, printers and publishers, textile and apparel, and wood products and furniture manufacturers. The state SBDC Director decided to divide the state into two sectors for service purposes—one headquartered in Hampton Roads, and responsible for all of Virginia east of I-95, and the other headquartered in southwest Virginia and responsible for areas west of I-95.

Initially, the SBDC designed a program where it would take the lead in pollution prevention training for small businesses, with the Virginia Department of Environmental Quality (DEQ) developing training sessions, providing technical assistance and assisting SBDC personnel with on-site pollution prevention assessments. In order to achieve the goal of linking existing pollution prevention programs in the state, the SBDC identified five specific work activities:

- Develop a pollution prevention training program aimed at SBDC personnel, with emphasis on technologies and assessment processes.
- Provide on-site pollution prevention assessments, pollution prevention technical assistance through toll free telephone service, and distribution of pollution prevention literature aimed at the target sectors.
- Focus the program on five target sectors: automotive body repair establishment, printing and publishing companies, machine shops, and wooden components and furniture manufacturing establishments.
- Develop pollution prevention educational modules for the five target sectors that focus on financial benefits of a pollution prevention approach to environmental compliance.

Program milestones were also set at the beginning of the project. Overall, the program was to conduct 30 workshops during the year, serving at least 230 participants, and provide assistance to 50 businesses within the grant timeframe.

### **D. Wisconsin**

The Wisconsin SBDC proposal also received funding from the Small Business Administration for the pollution prevention pilot. The goal of this program was to make pollution prevention

assistance and education for small businesses in Wisconsin an integral part of the existing SBDC framework. The program would provide environmental resources and multi media pollution prevention assistance to the small business community.

This program planned to target the wood products, printing, metal fabrication, electronic equipment, plastics, and industrial machinery industries. The SBDC, in partnership with the Solid and Hazardous Waste Education Center (SHWEC), planned to develop outreach materials (including fact sheets and videotapes) and to hold pollution prevention workshops in order to communicate business benefits and technical approaches for reducing sources of hazardous and non-hazardous solid waste, wastewater discharges, and air emissions. The SBDC also intended to integrate multi-media pollution prevention opportunities, environmental financial planning, and environmental referral services into general business presentations and materials in order to reach a wider range of industries.

This program was a collaborative effort of the Wisconsin SBDC and SHWEC, which are both housed at the University of Wisconsin Extension Center. They proposed the following activities to meet the goals of the pilot:

- targeting small business clients based on both SBDC data and environmental data;
- developing SBDC outreach materials for multi-media pollution prevention for small businesses;
- delivering training to small businesses on multi-media pollution prevention, both in workshops and through distance learning;
- developing a curriculum for training SBDC staff on multi-media pollution prevention;
- integrating multi-media pollution prevention, financial planning and referral services into on-going SBDC activities.

The SBDC planned to evaluate their progress utilizing existing methods. It participates in the annual national economic impact survey conducted by the Association of Small Business Development Centers, which provides automatic follow-up on clients serviced by the SBDC. In addition, the SBDC and SHWEC participate in the University of Wisconsin's ongoing accountability process that measures and evaluates program efficiency.

#### **E. Vermont**

The Vermont SBDC environmental assistance program received funding directly from the Pollution Prevention Division in EPA's Office of Pollution Prevention and Toxics. The goals of the EPA grant were essentially the same as those for the four SBA grants. In 1996, the Vermont SBDC applied to EPA for supplemental funding, which further expanded, but did not fundamentally change, pilot goals.



The pilot was designed to provide free and confidential environmental assistance to small businesses. The services offered were in response to needs identified by the state's small business community. These needs include free on-site environmental assessments, workshops on environmental issues, permitting facilitation, neutral party contact with regulatory agencies, and same-day service in response to client questions, when possible.

The objective was to bring together the SBDC and existing pollution prevention programs through a coordinator housed at the SBDC. The primary pollution prevention partners were the Retired Engineers and Professionals (REAP), which utilizes the expertise of retired engineers to provide pollution prevention assessments, and the Vermont Pollution Prevention and Education Division, a non-regulatory technical assistance arm of the Department of Environmental Conservation, Vermont Agency for Natural Resources (ANR). The program's designers did not want to create a wholly new program, but to tap into available non-SBDC resources by educating SBDC counselors on accessing those resources. This was to be achieved within existing SBDC programs in a cost-effective manner, so that the program would be sustainable.

Through the partnership, REAP would develop a new client stream due to the SBDC's business contacts, while the SBDC would have access to a pool of qualified professionals to assist clients in meeting environmental requirements cost-effectively.

The goals of the Vermont SBDC Multi-Media Pollution Prevention Pilot Project were:

- Incorporate environmental concerns into existing SBDC programs.
- Disseminate pollution prevention financial and technical assistance through both new and existing programs.
- Develop collaborative partnerships involving the public and private sectors that build on existing pollution prevention efforts and programs in Vermont.
- Assist small businesses in realizing the financial benefits of incorporating pollution prevention into business practices.

To meet these goals, the Vermont SBDC planned to launch the following activities:

- ◆ *On-site pollution prevention technical assistance for small businesses:* These assessments would be performed mainly by the REAP volunteers, and in part by the environmental coordinator at the SBDC.
- ◆ *A training program for SBDC specialists on basic pollution prevention concepts and resources:* The training program was to be designed to give SBDC counselors a very basic overview of environmental concerns so that they could assist the clients in understanding both requirements and opportunities.

- ◆ *A marketing and referral system:* The marketing program consisted of direct mailings, and counselor referrals to make businesses aware of the program and direct them to technical support.
- ◆ *Development of a small business environmental compliance module:* This module would be included in the SBDC's "Business Basics" workshops for small businesses.
- ◆ *Incorporation of a pollution prevention module into the guidance for business plan development:* Both this module and environmental compliance module were projected to give the program a valuable legacy; they could still be used long after the pilot had been completed.
- ◆ *Exploration of an environmental legal clinic:* This would provide information for small businesses on environmental issues, and would be carried out in conjunction with the Vermont School of Law and the Vermont Agency of Economic Development.

The project evaluation was to consist of a follow-up with the REAP clients to determine whether they made any changes based on the assessment.

## **F. Pennsylvania**

Pennsylvania's Small Business Pollution Prevention and Compliance Assistance Project, like the Vermont pilot, received funding directly from EPA's Office of Pollution Prevention and Toxics. The Agency awarded the grant in September, 1996. Funding was initially provided for a two-year period. The purpose of the project was to pilot a small business assistance program that would help to integrate environmentally sound practices into the management of small businesses in Pennsylvania and to include the expanded business assistance delivery capability in the State's Environmental Performance Agreement with EPA.

The Pennsylvania Small Business Development Centers (PASBDC) are organized so that each center represents a partnership between higher education, state and local government and the private sector. The State Director's office planned to provide overall direction for the pilot project, although direct day-to-day responsibility for the operation of the program was assigned to the environmental program technical coordinator who reports directly to the State Director.

The goal of the project was to produce a mechanism for standardizing the provision of similar pollution prevention and compliance-related education and technical assistance through SBDCs statewide. A large part of this effort was to establish links and partnerships with existing environmental assistance providers in the state. The PASBDC actively participated in the Pennsylvania Environmental Assistance Network (PEAN) which is a statewide consortium of public and private business and technical assistance organizations that work together to promote ecologically sound business practices in small- and medium-sized businesses. The PASBDC

also wanted to form a partnership with the Pennsylvania Department of Environmental Protection (DEP) and the EPA Region III Business Assistance Center. In addition to those partnerships, the SBDCs are all located at host colleges and universities throughout the state, offering additional partnering potential.

The SBDC expected to meet its project goals by performing the following activities:

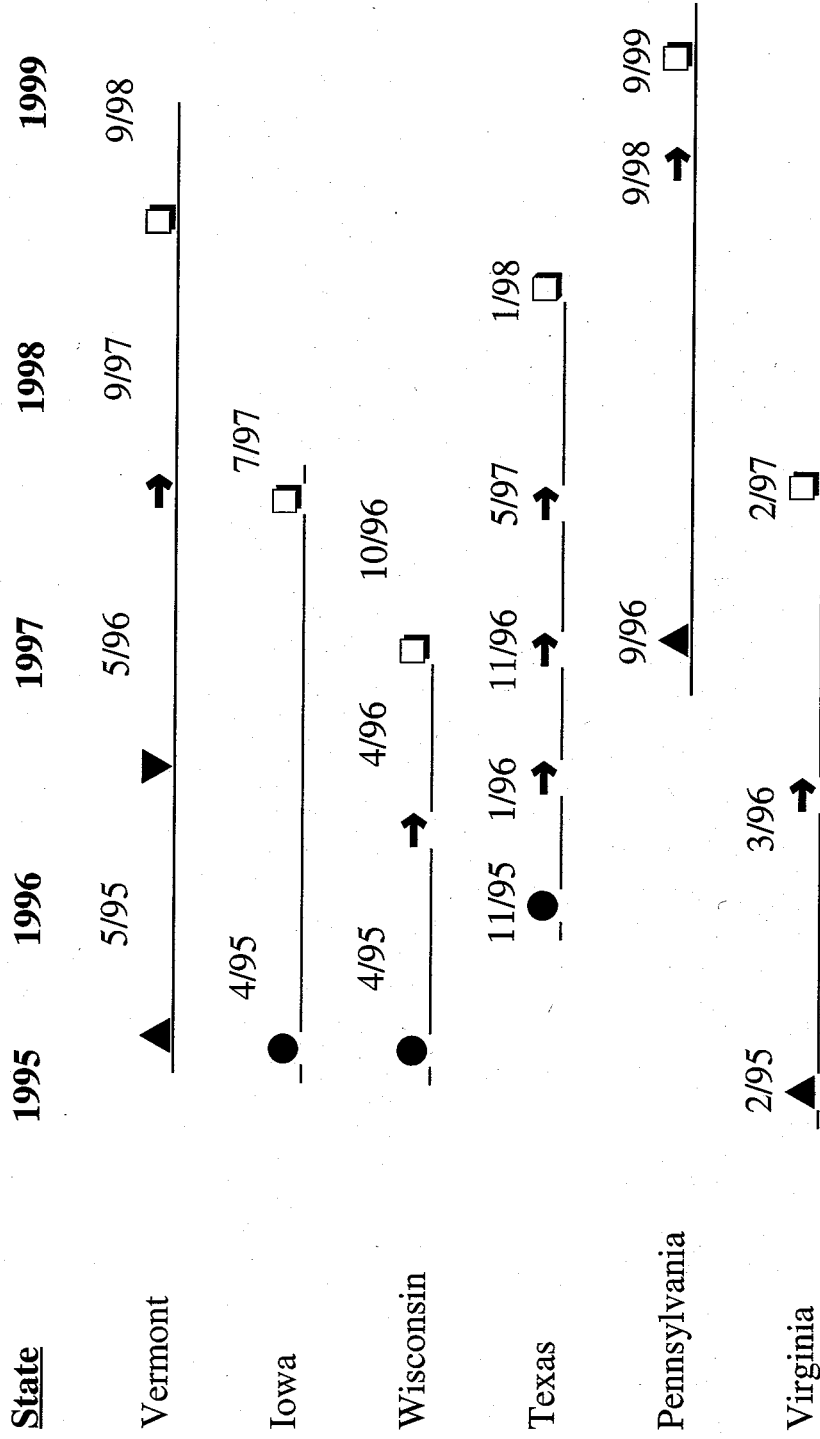
- Developing and conducting a series of six educational seminars focusing on pollution prevention, waste minimization and other environmental issues for Pennsylvania small businesses.
- Designing a follow-on program to the seminar series that targets specific businesses to address more site-specific needs, utilizing the combined resources of the university/college network and professional organizations such as the Retired Engineers and Professionals (REAP).
- Seeking out partnerships with other environmental service providers to ensure that small businesses have coordinated access to all resources.
- Identifying environment-specific databases, information services, and software that are available for use today, and evaluating these products to determine whether they can be incorporated into the PASBDC program to facilitate one-stop environmental assistance.

The Pennsylvania SBDC planned to develop an evaluation process which would provide data with which to evaluate the effectiveness of the services provided. This system would include a method to uniquely identify clients and their needs within the SBDC client base, a data collection and recording system, a method for client follow-up and a summary tabulation and reporting system. Because a data collection and management information system is already in place at PASBDC, adapting it to conform with the needs of the project was not expected to pose a problem.

### **III. Timelines for State Pilot Projects**

The first step in the SBDC grant program for environmental technology and small business was the signing of the November 1993 Memorandum of Understanding between EPA and SBA. The final activity took place under the grant to Pennsylvania; the PASBDC completed the pilot project in September 1999, and submitted its last annual report in November 1999. This section provides an overview of the timeline for the pilot projects through (a) a graph providing a composite overview of the state program timelines, (b) a more detailed composite summary of key events in the history of the pilot projects, and (c) individual state activity timelines. The state timelines present an approximate visual depiction of what activities happened during what time periods under the grants. These are based primarily on the information from quarterly and annual reports, not all of which are available.

**Table 4: Timeline for the Small Business Development Centers  
Environmental Assistance Programs**



Key: ● = SBA funded project  
 ▲ = EPA funded project  
 ▼ = request for supplemental funding  
 → = end of project  
 □ = end of project  
 → = Request for a no cost extension

**Table 5: Composite Summary of Key Events in the SBDC Pilot Project Program**

11/93	Memorandum of Understanding between SBA and EPA on Environmental Technology and Small Business
9/94-10/94	Solicitation funded by EPA for SBDC Multi-Media Pollution Prevention Activities
11/94	Proposals Selected for SBA grant: Virginia, Iowa, Texas and Wisconsin
2/95	SBDC program start date for Virginia
4/95	Iowa, Wisconsin start date for SBDC program. Vermont start date for EPA grant
11/95	Texas SBDC program start date after personnel difficulties resulted in no-cost extensions to the original award
1/96	Texas SBDC files for a no-cost extension to the grant project for 3 months through July 1996
3/96	Virginia SBDC applies for a no-cost extension to the grant until February, 1997
4/96	Vermont filed Progress Report for the 1 <sup>st</sup> year's activities: 16 REAP assessments, technical assistance to 35 small businesses, REAP relocated to the same physical structure as the SBDC, conducted two SBDC Specialist training sessions, set up a SBDC pollution prevention resource library, created a pollution prevention environmental compliance module as a training tool
5/96	Vermont SBDC requests supplemental funding to continue the Environmental Assistance program through FY98
7/96	Pennsylvania applies for SBDC funding from EPA
9/96	Pennsylvania start date for SBDC program under separate funding from EPA
10/96	Final report from Wisconsin included series of 4 half-day training sessions provided to small business counselors in Wisconsin to give participants training in essential pollution prevention concepts and in the use of the "Small Business Waste Reduction Guide". Used "Expanding Partnerships" video as part of the training. There were 27 participants from 7 different SBDC campus offices among others.
	Texas files Environmental Assistance Program Accomplishments to date which showed that although 3 pollution prevention workshops were scheduled at

University of Texas, Arlington, they were not held due to low enrollment. However, the TEEX program (Texas A&M Engineering Extension Program) completed all program requirements detailed in proposed work plan, including completion of two market studies and in-depth work with three electronics firms. In addition EAP provided assistance to 60 businesses, 101 hours of assistance, 15 training events with 308 attendees and approximately 1,120 training hours provided.

Wisconsin files Progress Report covering 4/95-7/96. Notable shift of focus from 4-5 manufacturing sections to a broad spectrum of both manufacturing and non-manufacturing businesses. They developed a Waste Reduction Guidebook and other training materials as the core tool for SBDC counselors and their clients, drafted content outlines for a guidebook, and video materials were sent to all SBDC offices and county Extension offices for comment, hired a technical writer to support the research and writing of waste reduction guide, and a script writer for video, contracted with Public television for video shooting and production facilities, provided workshops for auto service and auto body shops, took part in initiation of Wisconsin Manufacturing Extension Partnership (WMEP) which is supported by NIST and functions as a technical assistance provider for small business enterprises.

- 11/96 Texas requests a no cost extension for the project through May 1997. This is due to the fact that although TEEX fulfilled its obligations under the contract, there was grant money left unspent and EAP could continue to operate with these funds, and allow UTA CERT to finish its work.
- 4/97 Virginia files a final report. Highlights of the program include: 27 workshops conducted with 160 attendees, public television broadcasts of a Pollution Prevention program, and focused outreach to targeted businesses through direct mailings.
- 5/97 Texas requests a no-cost extension to the grant from May 31, 1997 to January 30, 1998.
- 7/97 EPA receives a final report for Iowa activities through the 4<sup>th</sup> quarter. Iowa reports that it has met all milestones with regard to organization, cross-training, financing, p2 implementation and small business education. Also finished preparing sector Pollution Prevention Implementation Plans (PPIP) and Pollution Prevention Modules.
- 9/97 Vermont requests a no-cost extension until 9/98
- 10/97 Vermont awarded supplemental grant funding for SBDC project for one year and submitted 4<sup>th</sup> Quarter Progress Report for FY97. The accomplishments include: completed 18 out of 20 on-site assessments, with followup in progress, held 5

environmental workshops with 107 attendees, participated in a variety of meetings, conducted marketing, and provided input into at least one directory.

- 11/97 Pennsylvania submits it's first annual report for the time period 9/1/96-8/31/97. Major accomplishments include initial program planning and design, and networking and partnership building. More than 100 members of the PASBDC staff received environmental training at 6 internal training events during the year.
- 1/98 Texas completes the period of the grant. No final report was available.
- 9/98 Pennsylvania receives a no-cost extension until September 1999.
- 12/98 Vermont submits a 4<sup>th</sup> quarter and final report on the Environmental Assistance Cooperation Project. The 3-year summary shows 5 business environmental fact sheets developed, 35 on-site environmental assessments, development of the Vermont Business Environmental Partnership, Green Hotels Program, 22 business environmental workshops held with 381 attendees, 276 requests for information or technical assistance, updated Vermont SBDC Business Planning Guidelines to include environmental issues, creation of an environmental module for a business planning course, participation in development of a network to assist Vermont businesses with environmental issues.
- 7/99 Pennsylvania SBDC files its second annual report covering the period 9/1/97-8/31/98. Highlights for the year include conducting 13 environmental workshops, and responding to 127 requests for information and assistance.
- 11/99 Pennsylvania SBDC files it's third annual report covering the period 9/1/98 - 8/31/99. Highlights include responding to 154 requests for information and assistance. Internal environmental training was offered throughout the year.



**Table 6: Individual State Activity Timelines for Small Business Development**

**Centers Environmental Assistance Program**

**Iowa**

Activity	4/95	4/96	4/97	7/97	4/98
Develop Project Team and Conduct Project Planning					
Develop Cross Referral System					
Conduct Internal Training					
Conduct Training on SBDC Pollution Prevention Tools					
Explore and Develop Financing Options					
Develop Financing Materials and Educate Lenders					
Improve On-Site Pollution Prevention Reviews					
Develop Sector PPIP's and Develop Pollution Prevention Modules					
Develop and Use Small Business Marketing Materials					

Wisconsin

Activity	4/95					4/96	10/96
Target Small Business Clients							
Develop Outreach Materials							
Deliver Pollution Prevention Training to Small Businesses							
Develop Curriculum for Training to Wisconsin SBDC Staff							
Deliver Training to Wisconsin SBDC staff							
Integrate Pollution Prevention, Financial Planning and Referral Services into ongoing SBDC Services							

Texas

Activities	11/95							11/96		9/97	1/98
Disseminate Current Environmental Information to Small Businesses											
Provide Environmental Counseling to Small Businesses											
Assist Small Businesses in Manufacturing Practices											
Build a Network Regarding Environmental Issues Between Major Manufacturers and Small Businesses	*										
Train Small Businesses on Environmental Issues											

\* No evidence that this occurred in the literature available.

Virginia

Activities	2/95				2/96					2/97
Training Program for SBDC Personnel on Pollution Prevention Issues, Assessment Processes										
Pollution Prevention Technical Assistance										
Focus Pollution Prevention of High Priority Virginia Businesses										
Develop Pollution Prevention Educational Modules for the 5 Industry Sectors										
Training Events										

**Pennsylvania**

Activity	9/96	9/97	9/98	9/99
Conduct Internal Training				
Conduct Outreach to Small Business Community				
Conduct at Least 5 Seminars on Environmental Regulations				
Develop a Consultant's Training Program for More In-Depth Assistance				
Conduct On-Site Assessments				
Provide Small Businesses Access to Technical Materials				
Create Effective Partnerships with Regulatory Agencies and Other Assistance Organizations				

**Vermont**

Activity	4/95	4/96	4/97	4/98	9/98
On-Site Assessment to Small Businesses					
Training Program for SBDC Specialists on Basic Pollution Prevention Concepts and Resources					
Marketing program					
Small Business Environmental Compliance Module					
Incorporation of Pollution Prevention in a Business Plan Module					
Project Evaluation					

## **Chapter 2**

### **Promoting Pollution Prevention Technical Assistance for Small Business: SBDC Pilot Project Activities**

This chapter summarizes the activities carried out under the P2 pilot project grants for SBDCs. SBA funded four P2 grants to SBDCs in Iowa, Texas, Virginia and Wisconsin, while EPA funded two additional grants to Pennsylvania and Vermont. Work under the SBA grants began in 1995, while the final efforts under EPA's grant to Pennsylvania were completed in 1999. The previous chapter summarized the goals, timelines and initial budgets of the grants. This chapter summarizes what happened after the SBDCs began to implement the grant projects. The first section of the chapter provides an overview of the major types of partnerships and activities under the grants, and looks at SBDC approaches to evaluating the benefits of the environmental services they provided. The second section provides summaries of the six individual state programs.

While not directly related to the SBDC P2 grants, planning grants for coordinating environmental assistance services at the state level were awarded by the National Institute of Standards and Technology (NIST) to four of the pilot states. The third section of this chapter reviews whether, and the extent to which, these four planning grants affected the SBDC activities which are the subject of this study.

#### **I. OVERVIEW OF STATE PILOT PROJECTS**

The state SBDCs developed proposals for the pollution prevention grant funding based both on their assessments of local needs and on their relationships with environmental assistance providers in their states. The situations and the relationships varied significantly from state to state, resulting in a variety of approaches and experiments. In some cases, the SBDCs made adjustments to their original project or partnership plans as they developed additional information on client needs and/or partner capabilities at the outset of the projects.

##### **A. Organizations: the SBDCs and Their Partners**

All of the SBDC proposals projected working relationships with environmental assistance providers within the states. The proposals envisaged a wide range of project partners, including P2 technical assistance programs in both regulatory or non-regulatory organizations, small business assistance programs (SBAPs) mandated by the 1990 Clean Air Act Amendments, university extension and engineering programs, and manufacturing technology centers. In some cases, there were plans for developing a network of cooperating assistance providers.

The partnership experiences under the projects were diverse. The most fully-collaborative project design was that of Wisconsin, where the grant went to the University of Wisconsin

Extension service which houses both the SBDC and the state's pollution prevention technical assistance program, the Solid and Hazardous Waste Education Center (SHWEC); the project director was a SHWEC employee whose office was at the SBDC in order to ensure improved communication and cooperation. There was substantial sharing of effort on project tasks throughout the pilot. While less formalized, the pilot project in Vermont involved a close working relationship between the SBDC and the state's technical assistance providers. The environmental director of Pennsylvania's SBDC, which has recently received state funding to expand its environmental assistance capabilities, is planning to place specialists in areas of the state corresponding to the environmental agency's regional offices (which house P2 technical assistance specialists) in order to try to create local cooperation similar to that of the much smaller Vermont.

Not all collaborations happened as planned. In Virginia, for example, where the SBDC divided the state between eastern and western offices, the environmental specialist in the western half of the state developed a working relationship with the pollution prevention technical assistance group in Virginia's Department of Environmental Quality, but there was no contact between DEQ and environmental specialist for the eastern half of the state after an initial meeting. In Iowa, the P2 technical assistance group at the University of Northern Iowa became the principal implementer for the project due to unanticipated resource problems which limited the role of the SBDC.

Beyond close cooperative efforts, there were also a multitude of relationships which involved occasional support and sharing. Most states had at least some elements of such relationships. In Texas, for example, the North Texas SBDC had a contractual relationship for specific services with two university centers, as well as working with the Texas Natural Resource Conservation Commission in producing some of the materials to be used by SBDC counselors with their clients.

There was also another dimension to collaboration—efforts to share resources and information across state boundaries. The best single example of this kind of cooperation is a pollution prevention guide produced by SHWEC, with recommendations and review from the Wisconsin SBDC. The guide both utilized materials developed in other states, and became a resource for many other states—not just those involved in the pilot project. Anticipating that the Wisconsin guide would meet its needs, North Texas SBDC was able to re-direct resources it had planned to use to develop a P2 module for business development plans to other environmental assistance efforts. Pennsylvania's SBDC was able to modify the Wisconsin guide rather than developing a new guide of its own.

Information on the specific state cooperative efforts is in the second section. While these experiences often reflect the particular personalities or organizational alignments of the individual states, a review of them could be useful for the design of future cooperative efforts.



## B. Project Activities & Targets

The SBDC pilot projects involved a wide range of activities. There was no single blueprint. Some of the states tried to follow closely to their initial project proposals, though generally there were some adjustments as the pilots progressed. The most dramatic change was in Wisconsin. While the initial project plan involved focusing assistance efforts on five specific sectors which reflected SHWEC's experience and expertise, both the targets and the focus shifted when it became clear that these sectors did not correspond well with the SBDCs' client base. The result was a change to a focus on a broad range of sectors, and the use of resources to develop technical, educational and training materials which would be of broader value both to counselors and clients. Table 7 summarizes the actual project activities under the six grants; the activity categories are based on those suggested by SBA in the grant solicitation.

**Table 7: Overview of SBDC P2 Small Business Support Activities**

<b>Program Activities</b>	<b>IA</b>	<b>PA</b>	<b>TX</b>	<b>VA</b>	<b>VT</b>	<b>WI</b>
<i>Technical and financial assistance</i>	X	X	X	X	X	
<i>Financial and commercialization assistance for technology developers</i>	X		X			
<i>Development of marketing materials for environmental programs</i>	X	X	X	X	X	X
<i>Compilation and dissemination of pollution prevention financing opportunities</i>	X	X				
<i>Development of pollution prevention educational curriculum</i>	X	X	X	X	X	X
<i>Development of a sector focus</i>	X		X	X	X	X
<i>Development of a P2 module for incorporation into guidance for business development plans</i>	X	X			X	X
<i>Other</i>		X	X			

Table 8 provides an overview of the sectors which became the actual focus of the state pilot projects.

**Table 8: Business Sector Targets During the Pilot Projects**

Type of Business	IA	TX	VA	WI	VT	PA
Printing and Publishing	X		X	X		X
Metal Fabrication of Agricultural Products	X					
Vehicle Maintenance	X		X	X		
Machine Shops			X	X		
Textiles and Apparel			X	X		
Wood Products				X		X
Furniture Manufacturing			X			
Electronic Equipment		X		X		
Plastics				X		
Industrial Machinery				X		
Metal Fabrication				X		
Specialty Foods					X	
Tourism/hotels				X	X	
Dry Cleaning		X		X		X
Landscaping				X		
Construction				X		
Health Services				X		
Coating/Painting				X		
Photo Processing				X		
Retail/Warehousing				X		

## **C. Measurement of Results**

Measures of results are important for assessing the accomplishments of any program. This has been a problem area for environmental programs—both regulatory and non-regulatory. State pollution prevention technical assistance programs have struggled to find useful measures of success which can be tracked without too great an expenditure of the limited resources available for environmental assistance activities. Nor have environmental regulatory programs, which have utilized activity measures for numbers of inspections, permits, etc. provided better models.

The measures for the SBDC pilot projects were generally limited to activity measures—e.g., numbers of workshops, number of attendees, number of clients receiving assistance. There was little formal effort to measure the impacts of the services in terms of wastes reduced or dollars saved. To some extent, this may have been due to the short time periods involved. The major exception was the Iowa Waste Reduction Center, which has had a regular system in place for years for assessing the actual results of their P2 technical assistance services by reviewing, at six-month intervals, clients' implementation of IWRC recommendations, and the outcomes of any measures implemented. IWRC followed this process for the SBDC clients served under the project (although there does not appear to be any discrete record of client results specific to the project). The records of the SBDC-IWRC project are part of the larger record of IWRC and are not easily sorted out.

## **II. SUMMARY OF STATE PILOT PROJECT EXPERIENCES**

### **A. Iowa<sup>1</sup>**

#### *SBDC Organization*

Iowa has four large centers for SBDCs in the state: Iowa State University, University of Iowa, University of Northern Iowa, and Drake University. The State Director is housed at Iowa State University. There are 16 other offices at community colleges around the state and one in a chamber of commerce. All counselors are employees of the SBDC. The State Director renegotiates contracts with the hosts each year, although they have not changed for several years.

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<sup>1</sup>Sources of information for this section include: (a) interviews with Ron Manning, State Director, SBDC, Lyle Bowlin, former Director of UNI SBDC, John Konefes, Director, IWRC, Christine Twait, Program Manager, IWRC (b) summary report on the Iowa Pollution Prevention Initiative (IPPI) project, comprised of 4 quarterly reports, submitted to Ed Weiler, US EPA, by Lyle L. Bowlin, Director, UNI SBDC, 7/11/97.

### *Pilot Goals & Objectives*

There were no significant changes in the goals and objectives for the pilot between the original application and the actual implementation of the project. The goals of the pilot were to:

- address and reduce barriers to implementing pollution prevention in small businesses;
- explore, expand and increase awareness of financing options for pollution prevention projects; and
- educate small businesses, lending institutions, and service providers on the benefits of pollution prevention related to their specific interests.

To achieve these goals, the SBDC participants wanted to forge a relationship with the Iowa Waste Reduction Center (IWRC), which has a mission to provide a variety of technical support and training for small businesses in meeting environmental requirements, with particular emphasis on pollution prevention techniques and approaches which can both improve both compliance and the bottom line. The SBDC expressed its goal as a mission to collaborate with the IWRC to provide environmental assistance to clientele. The SBDC did not intend to provide environmental assistance directly. It wanted representatives from the SBDC offices to team up with IWRC representatives to do preliminary assessment and provide recommendations for pollution prevention to their clientele. SBDC's role was to provide help to its clients in implementing IWRC recommendations, and to assist them, if necessary, in identifying sources of financing.

### *Activities, Roles & Targeted Sectors*

The organizations participating in the pilot were the SBDC and IWRC; no other agencies played an active role. Both the principal SBDC participating in the contract and the IWRC are located at the University of Northern Iowa, providing a good opportunity for the organizations to work together.

Several activities were planned and implemented under the grant, although the actual roles of the SBDC and IWRC changed during implementation.

- *Cross training of SBDC and IWRC staff:* SBDC and IWRC staff participated in cross-training in which each focused on the relevant services and capabilities of the other, and in which IWRC provided background on the relation of pollution prevention to business assistance. One example of the benefits of this training was increased awareness on the part of the SBDC staff that many clients lack accounting systems that accurately reflect waste generation sources and related costs.

- *Pollution Prevention counseling and training:* A major component of the information for this training was the development of sector-specific Pollution Prevention Implementation Plans (PPIPs) incorporating technical and financing options, financial benefits and implementation strategies derived both from the past work of the IWRC and the experience of the teams in providing assistance to targeted businesses.
- *Multi-media pollution prevention assistance:* IWRC and the SBDC provided on-site pollution prevention opportunity assessments and business assistance to small business clients of the SBDC. The original plan was that the on-site assistance would be provided by teams comprised of a member from the University of Northern Iowa SBDC and from IWRC. The teams would develop specific pollution prevention recommendations and reports for the businesses, which would include options for financing for recommended alternatives. SBDC staff would provide assistance to overcome implementation barriers. Formal followups would assess the extent to which recommendations were implemented. According to representatives of both organizations, most of the site-visit assistance was provided by the IWRC.
- *Development of pollution prevention modules for business development plans for the three identified business sectors (Printing and Publishing, Metal Fabrication, and Vehicle Maintenance):* These modules contain information on costs and benefits of pollution prevention and the best financing options; the modules are for incorporation into the operations sections of business development plans. In addition, the pilot would also create a generic pollution prevention module for general small business clientele.
- *Information on the benefits of using the PPIPs and modules for SBDCs around the country:* Marketing materials were prepared for SBDCs around the country on the benefits of using the PPIPs and P2 modules.
- *P2 financial information:* The SBDC worked with financial institutions to modify existing P2 cost-accounting software to make it more useful for small businesses.

While IWRC's planned role was to work with the SBDC in the development and writing of the PPIPs and modules, the PPIPs and modules were developed by the IWRC. According to the SBDC State Director, the predominant role of IWRC in both on-site assistance and development of P2 assistance materials happened for a variety of reasons relating to unanticipated resource and personnel problems, but did not reflect a lack of commitment by the SBDC to an environmental assistance program. According to the SBDC State Director, the local SBDC Director had this project added to an already full work load and did his best despite distractions.<sup>2</sup> Nonetheless, at the end of the grant period, the relationship between IWRC and SBDC was strained.

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<sup>2</sup> From an interview with Ron Manning, SBDC State Director on 11/10/00.

The environmental assistance project in Iowa targeted three categories of clients: vehicle maintenance, metal fabrication, and printing. These sectors were targeted because the IWRC had done a considerable amount of pollution prevention work with small businesses in these sectors, and each of the sectors had been the topic of pollution prevention research. Specific pollution prevention guides had been developed for the industries, which provided a good foundation for creating the Pollution Prevention Implementation Plans and for building pollution prevention into business planning. Further targeting of individual businesses within sectors were based on assessments of pollution prevention opportunities developed from information from the SBDC databases.

One activity from the original plan was not completed. The SBDC and IWRC had intended to hold a Pollution Prevention Conference and Vendor Show at the end of the grant period to highlight pollution prevention equipment and services available for the targeted sectors. It was never held, however, due to lack of interest on the part of SBDC clientele.

The progress reports from the SBDC indicate that all milestones were met within the contract period, but that there was some delay in completing the financing module for the business development plans. The module was completed within the extended contract period.<sup>3</sup>

### *Timeline*

The project began in April, 1995, and ended in July, 1997. Iowa received no additional funding from SBA. While we could not find a specific record of either the request or approval for a time extension, it is apparent that the SBDC received no-cost extensions to extend the project from 1 year to 2 years, 3 months.

### *Budget*

The budget for the project called for \$200,000 in federal grant money plus \$50,000 in matching funds from the state for a total of \$250,000 for a one year project. IWRC was given \$71,000 for their services during this contract.<sup>4</sup>

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<sup>3</sup> Summary report comprised of 4 quarterly reports, submitted to Ed Weiler, US EPA, by Lyle L. Bowlin, former Director, UNI SBDC, 7/11/97; interview with Ron Manning, SBDC State Director on 11/10/00, and John Konefes, Director, IWRC, on 11/1/00.

<sup>4</sup> Information from Ron Manning, SBDC State Director on 11/10/00. We were unable to obtain any written confirmation.

## *Measurement*

The initial proposal stated that quarterly evaluations would be conducted and would address cross training, assistance to small businesses, and completion of marketing materials among other things. The only followup actually conducted, however, was IWRC's standard followup with clients. IWRC regularly goes back to clients after six months to track client implementation of suggestions. Forms were also sent out to the businesses by IWRC.<sup>5</sup>

## **B. Texas<sup>6</sup>**

### *SBDC Organization*

The recipient of the SBA grant was the North Texas Small Business Development Center (NTSBDC), based in Dallas. NTSBDC is one of four independent SBDCs that operate autonomously within the state. There is no single state director. NTSBDC has its offices in the Dallas County Community College, and is co-located with the Bill J. Priest Institute for Economic Development, which supports economic development in the region. NTSBDC has 5 specialty centers, located at the Dallas headquarters, and 13 field offices. The North Texas Environmental Assistance Center (NTEAC), which is one of the specialty centers, was established with the SBA grant. The North Texas SBDC is the only SBDC in the state to offer environmental assistance.

### *Pilot Goals & Objectives*

The goal of the NTEAC was to act as a centralized information center to educate small businesses about environmental compliance, and to integrate pollution prevention considerations into the SBDC's business assistance counseling and into companies' business management. As part of this effort, NTEAC planned to develop new partnerships with other environmental

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<sup>5</sup> From an interview with Lyle Bowlin, former Director UNI SBDC, 11/10/00.

<sup>6</sup> Sources of information for this section include: (a) interviews with Bill Weddle, current director of NTEAC program; Chad Cliburn, director of NTEAC program from 11/95 to 2/97; Elizabeth Klimback, Regional Director, NTSBDC; Kathy Ferland, formerly of TNRCC; David James, SBEA, TNRCC; Tamara Oatman, SBAP, TNRCC.

(b) reports and documents including: Letter from Liz Klimback, Regional Director, NTSBDC, to Ned Shepperson, Director of Program Management & Evaluation, SBA, 11/29/96; memorandum from Charles Shepperson, Deputy Associate Administrator for SBDCs, SBA, to Sally Murrell, Chief, Grants Management, SBA, "No-Cost Extension of SBDC Multi-Media Pollution Prevention Activities Grant," 1/22/96; memo from Debbie Ricke, TEEX, to Chad Cliburn, NTSBDC, "SBDC Multi-Media P2 Activities Subcontract," 12/11/95; memo from Chad Cliburn, NTSBDC, to Tracy Thompson, SBA, "Environmental Assistance Accomplishments to Date," 7/3/96; memo from Elizabeth Klimback, NTSBDC, to Bill Wenrich, Chancellor, DCCCD, "NTSBDC's Environmental Assistance Program Subcontract Agreement," 12/13/95; SBA Notice of Award to DCCCD, 4/7/95; letter from Vittorio Argento, UTA-Arlington, to Chad Cliburn, NTSBDC, with attached quarterly reports, 4/9/96; UTA-Arlington, "Cost Saving Through Waste Reduction in 5 Steps," 12/4/96; letter from Dava Owsley, DCCCD, to Darryl Glover, SBA, with attached financial reports, 5/13/98.

service providers. Some of these partnerships involved explicit roles and responsibilities for the partners; the University of Texas, Arlington, Center for Environmental Research and Training (CERT) and Texas A&M's Texas Engineering Extension Service (TEEX) had tasks to which they were committed as part of the proposal. But the goal also included developing working relationships with other environmental assistance providers in the state, such as the TNRCC non-regulatory small business and pollution prevention assistance staffs and, where appropriate, the NIST manufacturing centers. The proposal also included a potential partnership with the U.S. Department of Energy's center in Kansas City.

### *Activities, Roles & Targeted Sectors*

The North Texas SBDC provided a range of services under the grant which included training programs, direct pollution prevention assistance, and the development of compliance and pollution prevention assistance materials (including an information packet and a training video for dry cleaners). Some of these services were provided through partnerships with CERT and TEEX. In addition, the NTEAC director's background with Oklahoma's pollution prevention program provided a base of contacts with the Texas Natural Resources Conservation Commission (TNRCC) which made it easier to work with that agency's pollution prevention and small business assistance programs; TNRCC, for example, provided support in developing the technical assistance materials specifically for dry cleaners. While a partnership effort was initially considered with the Department of Energy's Kansas City center, it never materialized.

While the grant did not specify particular sectors, one of the goals under the grant was to identify and focus on sectors with pollution prevention opportunities. TEEX focused its support for the program on the electronics sector. It carried out two market studies on potential clients for P2 assistance services, and provided pollution prevention assistance to 22 SBDC clients, including in-depth efforts with 3 of those facilities. In addition, TEEX presented interactive workshops (with 12 attendees at each session) on pollution prevention, regulatory compliance and environmentally conscious manufacturing for the electronics and semiconductor industry.

CERT developed a general P2 training program entitled "Cost Saving through Waste Reduction in 5 Steps," which was offered on three occasions. In addition, CERT provided direct pollution prevention assistance to 10 businesses.

NTEAC directly carried out a range of activities which included on-site visits, training programs, videos and a teleconference. In developing its components of the overall program, NTEAC focused on industries for which there were both compliance assistance and pollution prevention opportunities. It put its largest effort into developing information and providing assistance for dry cleaners using perchlorethylene. In addition, it targeted printers and auto salvage yards.

One of NTEAC's first large projects was to develop a total outreach program for perc dry cleaners, who were subject to new EPA regulations for which the deadlines had already passed. NTEAC went to the businesses and quickly identified what changes were needed to come into compliance. They reached 200 dry-cleaning businesses in one summer. NTEAC also provided



an information package on regulatory compliance and pollution prevention for the dry cleaners, and developed a video which both walked business owners through the package of materials and forms, and explained some of the options and benefits of pollution prevention. TNRCC cooperated with NTEAC both in the identification of materials for the information packet, in providing a spokesman for the video, and in offering to provide assistance services to SBDC clients.

NTEAC also conducted a teleconference on "Pollution Prevention for Businesses- How to Reduce Costs and Liabilities and Comply with the Waste Reduction Policy Act" and used SBDCs throughout the state as downlink sites. The conference had 18 downlinks with attendance well over 100 persons. The NTEAC representative videotaped this conference and offered it for distribution.

Within the NTSBDC, NTEAC worked on raising the awareness of SBDC counselors about environmental issues. The goal was to get them to incorporate environmental issues at business intake meetings and provide them with enough knowledge to refer the client to NTEAC if needed. Over time, this began to work and the NTEAC representative felt there were significant numbers of referrals from the SBDC counselors.

Under the original plan for the grant, NTEAC was to develop an environmental module for business plan development. It did not develop this module because the Wisconsin SBDC was in the process of developing the very same module, and NTEAC planned to adopt Wisconsin's work when it was complete. This did not occur during the life of the project, but NTEAC did give presentations to local SBDC coordinators on incorporating environmental issues into business plan development.

### *Timeline*

The project was funded for one year (April 1995 to April 1996), but started late because the SBDC project manager was not hired until November 1995. A series of no-cost extensions were granted which extended the period of performance to January 1998. The final extension was granted because TEEX, while it had completed all its contract obligations, left federal funds unexpended. NTSBDC requested, and was granted, additional time to use these funds to provide direct environmental assistance to its clients.<sup>7</sup>

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<sup>7</sup> Letter from Liz Klimback, Regional Director, NTSBDC, to Ned Shepperson, Director of Program Management & Evaluation, SBA, 11/29/96; memorandum from Charles Shepperson, Deputy Associate Administrator for SBDCs, SBA, to Sally Murrell, Chief, Grants Management, SBA, "No-Cost Extension of SBDC Multi-Media Pollution Prevention Activities Grant," 1/22/96;

## *Budget*

The budget for the project was \$280,357, where \$161,550 was budgeted in federal grant money, \$71,907 in matching funds from the SBDC and its partners, and \$46,900 in in-kind or indirect costs. Of the federal funds, \$30,000 were allocated to CERT, and \$65,480 to TEEX. Due to the fact that TEEX completed its contract obligations while not expending all the federal funds initially allocated to it, \$12,939.32 in federal funds left in the contract were allocated back to the SBDC to provide additional environmental assistance. From a financial summary submitted to SBA by the SBDC on May 13, 1998, however, it appears that \$4,054.33 of the federal funds were never expended.<sup>8</sup>

## *Measurement*

Progress under the program was measured in terms of the numbers of clients served and workshops offered. There was an effort to develop some additional evaluation measures. Whenever NTEAC provided technical assistance or offered a workshop, an evaluation form was provided to the client(s), and that information was recorded in a master system. It does not appear, however, that the plan for analyzing that information was ever completed. NTEAC did not go back to customers subsequently to find out whether particular pollution prevention or compliance assistance suggestions were implemented.

## **C. Virginia<sup>9</sup>**

### *SBDC Organization*

The SBDC Network in Virginia is headquartered in Richmond, with 21 centers throughout the state. The system consists of a diverse group of hosts including colleges, universities, and the Manufacturing Technology Center (MTC). The state SBDC Director has a contract with each individual host and negotiates deliverables, which vary according to the host requirements. As a group, the directors for the individual SBDCs meet and negotiate what the network will do each year so that they are all moving in the same direction. Funding for the SBDC's in Virginia comes from the Department of Business Assistance.

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<sup>8</sup>Financial Status Report by the Dallas County Community College District, 5/11/98; SBA Notice of Award to the Dallas County Community College District, 4/7/95; letter from Liz Klimback, Regional Director, NTSBDC, to Ned Shepperson, Director of Program Management & Evaluation, SBA, 11/29/96.

<sup>9</sup> Sources of information for this section include:

(a) interviews with Vickie Humphries, SBDC, Bob Wilburn, State Director, SBDC, Larry Roberts, formerly with SBDC, Jim Carroll, Director, Hampton Roads SBDC, Marolyn Parsons, formerly Environmental Director with Wytheville SBDC, Joanne Chance, Environmental Assistance Director, SBDC, Sharon Baxter, DEQ, and Bill Sarnecky, DEQ.

(b) publications and reports including: VA SBDC, "Final Report of Program Activities," 3/28/97; VA SBDC, technical proposal for "SBDC Multi-Media Pollution Prevention Activities" grant.

When the Virginia SBDCs received the SBA grant for environmental assistance, two of the local SBDCs (Wytheville and Hampton Roads) volunteered to handle the finances, so the State Director decided to split the state and give the Wytheville SBDC the area west of the I-95 corridor and Hampton Roads SBDC the area east of I-95. The two programs operated independently of one another and had little interaction.

### *Pilot Goals & Objectives*

The goal of the SBA grant for environmental assistance to the Virginia SBDCs was to bring pollution prevention into the spotlight for small businesses by building links with Virginia's existing pollution prevention programs and to provide pollution prevention information and technical assistance to Virginia's small businesses. A secondary objective was to provide information on pollution prevention and regulatory compliance for the SBDC directors.

### *Activities, Roles & Targeted Sectors*

As noted above, the SBDC Network's management of the program was divided between the Wytheville SBDC (for the western part of the state) and the Hampton Roads SBDC (for the eastern part of the state). Program services were delivered through two environmental specialists, one at each SBDC location.<sup>10</sup> The two centers operated, in effect, as separate, independent programs with very little connection. Reports of activities for the two program components were placed together in a single report, but were separately developed. There were no additional core activities of the SBDC Network.

Because of the way this project was set up, it is difficult to characterize the partnerships that made the project work as a whole. Virginia Tech developed (with review and feedback from the SBDCs) 2-page fact sheets on pollution prevention and cost-savings for each of the five sectors identified for special focus under the grant—automobile repair, machine shops, printing, textile and apparel manufacturing, and wood furniture manufacturing. In Wytheville, there was considerable effort placed on developing relationships with other agencies, including the Department of Environmental Quality's (DEQ) Office of Pollution Prevention, the Philpott Manufacturing Center, and the Southwest Virginia Advanced Manufacturing Center. The Wytheville SBDC also used Planning District Commissions and Chambers of Commerce to help market the pollution prevention information. The Hampton Roads SBDC utilized the services of the local chamber of commerce and community college to advertise the program, but did not develop working relationships with other technical assistance programs.

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<sup>10</sup> The counselor in Wytheville was an employee of the MTC, who was under contract with SBDC for providing an environmental assistance counselor. Since this time, SBDC has made MTC an SBDC resource center for use by all the SBDCs in the state. The counselor in Hampton Roads was under contract for the duration of the grant.

At the Hampton Roads SBDC, serving the eastern part of the state, the program activities were initially directed at training, without much outreach. Due to very poor turnout for the workshops and seminars (five of nine "completed" workshops had no attendees, while the other four had a combined total of 26), the SBDC developed an alternative approach for getting the word out. Utilizing an SBDC client with high technology capability, the SBDC produced video tape and CD formats of a pollution prevention workshop. These were made available to the public, primarily through several broadcasts by local television stations as a public service. The SBDC also conducted mass mailings to almost 3600 potential recipients of pollution prevention assistance within targeted industries. It compiled mailing lists using information from Dun and Bradstreet and the mailing and postage services of Thomas Nelson Community College and the Hampton Roads Chamber of Commerce. During the life of the grant project, the SBDC claimed to have reached an audience of 5572 individuals. This number was based on a count including the mailings, seminars, and the estimated audience of the pollution prevention workshop aired on PBS and cable TV stations throughout eastern Virginia. The figure assumed an audience of 150 for each of 13 showings of the workshop (based on an assumed percentage of the total available cable viewing audience).

Hampton Roads SBDC also provided 28 cases of counseling assistance services to targeted industries. Examples of these services include:

- investigating environmental regulations and wastewater treatment and discharge systems for a laundromat,
- providing a pollution prevention assessment of an auto salvage yard, and
- researching the availability of grants and financing for an SBDC client considering purchasing a targeted business.

Finally, the Hampton Roads SBDC provided P2 training and information for SBDC personnel using the pollution prevention videotape/CD.

The Wytheville SBDC conducted training through workshops, provided assistance on a one-on-one basis to SBDC clients (either on-site or at the Centers), and made presentations to meetings of SBDC directors on the value of P2 approaches for assisting clients in business development.

The environmental assistance counselor in Wytheville conducted 18 pollution prevention and environmental workshops for a total of 134 attendees, and made additional presentations on P2 to four business audiences with 132 attendees. Some of the workshops were designed for specific industries, while others were marketed to a wider range of businesses. After poor attendance at some of the initial seminar offerings, the coordinator was able to improve attendance by involving local business related organizations (such as planning district commissions) and trade associations in marketing and planning the workshops.

Wytheville SBDC provided direct assistance to 28 different clients, mostly from the manufacturing sectors. Requests for assistance included help with hazardous waste disposal, Clean Air Act permits, recycling programs, regulatory information, manufacturing changes to eliminate waste, and pollution prevention information. The greatest interest was from machine

shop owners and wood manufacturers. Six of the requests for assistance were from SBDC directors; the rest were made directly to the environmental counselor by the companies. Nineteen site visits were performed. Where necessary, the SBDC coordinated with DEQ's pollution prevention technical assistance program to obtain necessary technical and research support.

During the final four months of the project, the counselor established an additional approach for marketing the pollution prevention program. A schedule for monthly "walk-in environmental and pollution prevention counseling" was established and promoted at two of the SBDCs in the western part of the state.

To meet the objective of training the SBDC directors in P2, the Wytheville counselor made presentations at the Director's meetings as requested.

### *Timeline*

The work began in February 1995, and the funding ran out in February, 1997. The Network received at least one no cost extension to finish the project.

### *Budget*

The budget for the project was \$149,200 in federal grant money, \$75,436 in matching funds from the state and \$13,000 in in-kind expenses for the SBDC, for a total of \$237,636. Virginia Tech received a portion of the funding to develop industry fact sheets.<sup>11</sup> While DEQ's Office of Pollution Prevention and Small Business Assistance Program cooperated in providing support for on-site technical assistance where it was requested by the Wytheville SBDC, there was no budget allocation (either federal or state cash or in-kind contribution) for DEQ.

### *Measurement*

Project measurement was provided in terms of workshop attendees, presumed viewers of video presentations, and direct assistance provided to clients, on or off site. As indicated above, there were substantial differences in how these numbers were recorded in the Hampton Roads and Wytheville programs. For example, the Wytheville SBDC planned 26 workshops, but cancelled eight due to low registration; the remaining workshops all had some attendees, with a total of 134. The Hampton Roads SBDC listed 9 completed seminars, even though only four were attended (with 26 attendees). There was no measurement of project impacts in terms of wastes reduced or financial savings.

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<sup>11</sup> None of the available budget information indicates the specific funding allocation for Virginia Tech.

## **D. Wisconsin<sup>12</sup>**

### *SBDC Organization*

There are 11 SBDCs, which are located at all of Wisconsin's four-year colleges and universities; they are a part of the university system. The University of Wisconsin has 13 campuses, and SBDC offices are at all locations. The University of Wisconsin Extension service (UWEX) is the host institution for the SBDCs. The SBDC director is responsible for implementation of all programs. The director's office, however, is for administration only; the other 10 SBDC offices provide assistance.

### *Pilot Goals & Objectives*

The goal of this project was to make pollution prevention assistance and education for small businesses in Wisconsin an integral part of the existing SBDC framework. The program was to provide environmental resources and multi media pollution prevention assistance to the small business community. The project differed from many of the other state pilots in that the objective was to develop a fully joint effort between the pollution prevention technical assistance entity, the Solid and Hazardous Waste Education Center (SHWEC), and the SBDC. The extent to which this pilot was a collaborative effort is best illustrated by the fact that the project manager was a SHWEC specialist who worked at the state SBDC office during the project in order to improve communication between SHWEC and the SBDC. Both SHWEC and the Wisconsin SBDC are programs of UWEX. SHWEC is located at Madison, Green Bay and Kenosha.

### *Activities, Roles & Targeted Sectors*

In its original proposal, SHWEC and the SBDC jointly proposed the following activities to meet the goals of the pilot:

- targeting small business clients based on both SBDC data and environmental data;
- developing SBDC outreach materials for multi-media pollution prevention for small businesses;
- delivering training to small businesses on multi-media pollution prevention, both in workshops and through distance learning;
- developing a curriculum for training SBDC staff on multi-media pollution prevention;

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<sup>12</sup> Sources of information for this section include:

(a) interviews with Erica Kauten, SBDC Director; Tom Blewett, SHWEC (project manager); Phil Kaplan, EPA Region 5.

(b) progress reports and final report on "Building Capacity to Promote Multi-Media Pollution Prevention Among Small and Medium-Sized Companies," submitted by Tom Blewett, SHWEC, to Ed Weiler, EPA.

- integrating multi-media pollution prevention, P2 financial planning, and P2 referral services into on-going SBDC activities.

The proposal initially targeted, based on prior SHWEC experience and expertise, several specific industry sectors. SHWEC proposed focusing on wood products, printing, metal fabrication, electronic equipment, plastics, and industrial machinery.

These plans were substantially changed after discussions between SHWEC representatives and SBDC office directors statewide. The proposed sectors represented only 15-30% of total SBDC clientele; the SBDC offices wanted a program relevant to a larger proportion of their client base. As a result, SHWEC and the SBDCs decided to focus on a broad spectrum of manufacturing and non-manufacturing industries.

With the changed focus on which types of clients to serve, SHWEC and the SBDC decided on a revised strategy to better address their new goal. They focused on developing a waste reduction guide and supporting materials which would provide the background for addressing this broader audience. The materials could be used for training SBDC staff, and subsequently could be used by the SBDC counselors in working with their clients. In addition, these materials would be available for distribution to other states.

In consultation with the SBDCs, SHWEC produced a "Small Business Waste Reduction Guide" and 2 videos. The Waste Reduction Guide was set up as an educational resource for the SBDCs, and was available both in a 3-ring binder and on-line at the SHWEC website. The Guide contains chapters on a series of P2-related topics, as well as brief 1-2 page fact sheets on waste reduction and recycling options for 17 major business categories (plus sub-categories in each) of businesses. For many of the categories and sub-categories, there are also brief case studies emphasizing the financial benefits of waste reduction. Among the P2 topics covered: the cost of waste, full-cost accounting, alternative approaches to waste reduction, technical options, and environmental regulations. Business areas include a variety of both manufacturing (e.g., plastics, printing, electronics) and non-manufacturing (e.g., retail/warehouse, hospitality, common business operations, health services) activities. The Guide provides an environmental regulatory P2 technical primer for small businesses.

The two videotapes present six case studies showing cost reduction through waste reduction. The videos included both materials SHWEC borrowed from around the country and materials developed specifically for the videos. The narrative provides segue from one case study to the next, and the videos were developed professionally with Wisconsin Public TV. Both videos used the same core of case studies, but had different introductions and conclusions. One was developed primarily for a Wisconsin audience, the other for use by any state.

SHWEC then developed a training for SBDC counselors, making use of these materials, and involving the counselors in problem-solving and role-playing. The training was designed to enable the counselors to make use of these materials with their clients.

These materials have subsequently been used extensively outside of Wisconsin. Twenty-seven states have requested copies of the Guide, and they have also been requested by UNEP and some foreign countries. The Guide has been made available electronically both on the SHWEC website and on EPA's Envirosense website.

In addition to the collaboration between SHWEC and the SBDC, other organizations which provided support or reviews and advice for the project included the Wisconsin Department of Natural Resources (DNR), Wisconsin Vocational and Technical Colleges, the NIST-funded Manufacturing Outreach Center at UW Stout, the Wisconsin Center for Manufacturing and Productivity, and chambers of commerce.

### *Timeline*

The dates for the project were from April 1995 to October 1996.

### *Budget*

The budget for this project was \$190,768 in federal grant money, \$27,000 in matching state funds and an additional \$44,918 in in-kind funding for a total of \$262,686. The final report indicates that only \$161,650 of the federal grant was actually expended. All budget proposal and expenditure numbers are specified as going to UWEX; no distinction is made between funding for SHWEC and the SBDC.

### *Measurement*

Because the activities carried out under this pilot involved the development of technical, educational and training materials, there was no measurement of the impact on SBDC clients.

## **E. Pennsylvania<sup>13</sup>**

### *SBDC Organization*

There are 16 SBDC centers in the state, all of which are college or university based. The state director's office is at the Wharton School of Business in Philadelphia. The SBDCs are funded

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<sup>13</sup> Sources of information for this section include (a) interviews with Greg Higgins, State Director, PA SBDC, Christopher Lynch, Director of Environmental Assistance, PA SBDC, Meredith Hill, Director of Pollution Prevention PA DEP, Eric Summa, Office of Air, Radiation and Recycling, PA DEP, and Greg Czarnecki, formerly Ombudsman with SBAP, PA DEP (b) 3 annual reports dated '96-'97, '97-'98, '98-'99, respectively, and a Final Project Report dated November 23, 1999, submitted to Ed Weiler, US EPA, by Christopher Lynch, PA SBDC.



by the Small Business Administration and the Pennsylvania Department of Community and Economic Development.

### *Pilot Goals & Objectives*

The goal of this project was to pilot a small business assistance program that would help to integrate environmentally sound practices into the management of small businesses in Pennsylvania. The SBDC wanted to produce a mechanism for standardizing the provision of similar statewide P2 and compliance-related education and technical assistance through SBDCs statewide.

The objectives were to:

- develop and conduct a series of seminars to provide small businesses with training on waste minimization, P2, and other environmental issues;
- design a more specific follow-on series of seminars to address the specific needs of small businesses;
- establish relationships with other environmental service providers;
- research and collect environment-specific databases, information services, and software to create a one-stop environmental assistance center;
- develop a strategy for positioning PA SBDC to play an active role in the development of Pennsylvania's Environmental Performance Agreement and/or Performance Partnership Grants in FY 97 and beyond.

### *Activities, Roles & Targeted Sectors*

Christopher Lynch, the project director, spent much of his first year on the job building relationships with different businesses and environmental assistance providers in the state.<sup>14</sup> The Pennsylvania SBDC actively participated in the Pennsylvania Statewide Environmental Assistance Network (PEAN) and formed liaisons with:

- Southeastern Pennsylvania Procurement Technical Assistance Center,
- Pennsylvania Drycleaners and Launderers Association,
- Pennsylvania Chemical Industry Council,
- Graphic Arts Association,
- Pennsylvania Food Merchants Association,
- Pennsylvania Convenience Store Council,
- Pennsylvania Department of Environmental Protection's AIRHELP,
- EPA Region III Business Assistance Center,
- Small business trade associations.

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<sup>14</sup> From an interview with Christopher Lynch, PA SBDC, on 11/17/00.

The Director actively pursued a relationship with Pennsylvania Department of Environmental Protection, chambers of commerce throughout the state, Ben Franklin Technology Center, Industrial Resource Centers, Retired Engineers and Professionals, Manufacturers Extension Centers, Pennsylvania League of Cities and Municipalities, and the Service Corps of Retired Executives (SCORE).

During the life of the grant, in-house training events included 2 mini-conferences held for 63 attendees, and several training sessions for SBDC personnel, reaching more than 400 people over a three-year period. These programs were designed to help SBDC staff achieve core competency requirements in P2 that were established as part of the grant.

Fourteen workshops were held for SBDC clients with 195 participants. In addition to the scheduled workshops, the SBDC had 288 requests for information and assistance, 67 of which required in-depth research and counseling.

The SBDC environmental program director fielded regulatory questions specifically about business start-up and sale of existing businesses, especially dry cleaners and gas stations. He found that his clients requested assistance with compliance issues and spent his time on this rather than pollution prevention. The SBDC focus on compliance issues was initially a source of friction with the Pennsylvania Department of Environmental Protection (DEP), which thought that the SBDCs should concentrate only on pollution prevention.<sup>15</sup>

One of the objectives of this project was to position PA SBDC to play an active role in the development of Pennsylvania's Environmental Performance Agreement and/or Performance Partnership Grants between EPA and DEP in FY97 and beyond. This did not occur because EPA and DEP have not signed a Performance Partnership Agreement, and none is anticipated until after 2000.

The SBDC also purchased the Wisconsin Small Business Waste Reduction Guide and planned modifications of the guide to more closely target the needs of Pennsylvania small businesses.

During the grant, the SBDC focus was on providing assistance to any company seeking support on environmental issues or problems. There was no effort to target specific industry sectors for attention.

### *Timeline*

The project, funded by EPA, began in September 1996 and ended in September 1999. This period included a no-cost extension to the original 2-year grant.

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<sup>15</sup> From an interview with Christopher Lynch, PA SBDC, on 11/17/00.

### *Budget*

The budget for the project was for \$196,792 for two years from EPA with matching funds from the state of \$9,840 for a total of \$206,632.

### *Measurement*

Project measurement was provided in terms of numbers of workshops, conferences and requests for information and assistance. There was no measurement of project impacts in terms of wastes reduced or financial savings.

## **F. Vermont**<sup>16</sup>

### *SBDC Organization*

In Vermont, SBA funding to support the SBDC is channeled through the Department of Economic Development and the Vermont college system. SBDCs are housed at 5 Vermont state colleges in 5 different counties. Within each county there is a Regional Development Corporation (RDC), each with its own elected board of directors. The RDCs' role is to attract businesses to their regions, creating financing packages as incentives; their role is closely tied to the goals of the Department of Economic Development. Each year a contract is renegotiated between the RDCs and the SBDCs. Vermont Technical College is the Administrative Center for the SBDCs.

### *Pilot Goals & Objectives*

The goals of the SBDC environmental assistance pilot project were to:

- incorporate environmental concerns into existing SBDC programs;
- disseminate pollution prevention financial and technical assistance through both new and existing programs;
- develop collaborative partnerships involving the public and private sectors that build on existing pollution prevention efforts and programs in Vermont;
- assist small businesses in realizing the financial benefits of incorporating pollution prevention into business practices.

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<sup>16</sup> Sources of information for this section include: (a) interviews with Don Kelpinski, State Director, SBDC; Peter Crawford, Director of Environmental Assistance, SBDC; and Gary Gulka, Chief, Waste Prevention, VT ANR. (b) Quarterly Progress Reports submitted to Ed Weiler, US EPA from Peter Crawford, VT SBDC, and a Final Report on the project submitted by Peter Crawford, VT SBDC to Ed Weiler, US EPA dated December 2, 1998.

## *Activities, Roles & Targeted Sectors*

Actual activities that occurred under the grant included the following:

- During the course of the grant, the SBDC conducted 35 on-site environmental assessments for manufacturers, providing them with pollution prevention and resource conservation recommendations, over 1/3 of which were implemented, and partnered with state and other environmental technical assistance providers for nearly 1/2 of these assessments.
- The SBDC environmental coordinator created an ongoing program to educate counselors about environmental assistance in Vermont.
- Marketing and referrals for the environmental assistance program were generally channeled through the activities of the Vermont Environmental Assistance Program (VEAP). The SBDC signed a Memorandum of Understanding with the Vermont Manufacturing Extension Partnership, the Vermont Agency of Natural Resources (ANR), and the Vermont Department of Economic Development to create VEAP, which is a coalition of environmental service providers with a formal relationship involving referrals and assistance.
- The SBDC developed an environmental compliance module for inclusion in "Fast Track II," a business planning workshop for SBDC clientele, the basic material for which is a product of the Kauffman Foundation.
- The SBDC updated Vermont's SBDC Business Planning Guidelines to include environmental issues and OSHA information.
- The SBDC worked with Vermont Law School to set up a "business legal clinic," but it didn't work out. The SBDC felt that the legal service wasn't providing their clients with the kind of support they needed, so the clinic was discontinued.<sup>17</sup>
- The SBDC developed the Vermont Business Environmental Partnership and its Green Hotels Program providing technical assistance and recognition for the lodging sector. This program provided 41 environmental management opportunity assessments for hotels, inns, and bed-and-breakfasts, co-sponsored with Vermont ANR.
- The SBDC responded to 276 requests for information or technical assistance from Vermont businesses and other organizations.
- The SBDC developed the following fact sheets:

*Incorporating Pollution Prevention into your Business Plan*

*Does your Business Produce Hazardous Waste?*

*Planning for the Cost of Solid Waste Disposal*

*Starting a Pollution Prevention Program at your Business*

*Environmental Issues (Red Flags) involving New Property Purchases or*

*Modifications to Existing Facilities*

Agencies participating in the grant project included Vermont Agency of Natural Resources, Retired Engineers and Professionals (REAP), Upper Valley Compliance Network, and VEAP. REAP was established in 1992 and utilizes the expertise of retired engineers and business

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<sup>17</sup> From an interview with Peter Crawford, SBDC on 10/25/00.

professionals to conduct multi-media pollution prevention opportunity assessments for volunteering companies. They perform on-site assistance, develop and implement training workshops, conferences, or industry-specific focus groups, and manage a pollution prevention library. While the SBDC depended on REAP for site assessments for part of the grant project, it decided not to continue using REAP to perform environmental assessments due to the fact that it was too difficult to keep the retired engineers and businessmen abreast of current and changing environmental regulations.<sup>18</sup>

Based on data from REAP, the SBDC targeted industries that, combined, represented 58% of the Vermont work force. These were specialty foods, wood products, printing/publishing, electronics, metals, and machinery. During the course of the grant, the SBDC decided to change the original focus and target specialty foods and ski-areas and tourism.

### *Timeline*

The original one-year EPA grant began in Vermont in May, 1995. The SBDC requested and received supplemental funding from EPA in 1996, and continued operating under the grant until September 1998.

### *Budget*

The Budget for the project was \$81,100 for one year, plus \$44,260 in matching funds from the state for a total of \$125,360. In May, 1996, the SBDC requested and received supplemental funding from EPA, which brought the total for the life of the grant to \$244,135.

### *Measurement*

Project measurement was provided in terms of numbers of workshop attendees, direct assistance provided to clients, completion of environmental compliance modules and their subsequent inclusion into SBDC workshops, and the development of fact sheets. In addition the Environmental Assistance Program Director follows up informally with clients to determine the effectiveness of his suggestions.<sup>19</sup> The SBDC also has a formal follow-up system under which it sends out qualitative surveys to all clients to assess the value of the service provided.

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<sup>18</sup> From an interview with Peter Crawford, SBDC on 10/25/00.

<sup>19</sup> From an interview with Peter Crawford, SBDC on 10/25/00.

### III. PLANNING GRANTS FROM THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)<sup>20</sup>

Four of the six states which received SBDC Pilot Project Grants also received NIST Environmental Coordination Planning grants in 1996. They are Vermont, Virginia, Texas and Pennsylvania. The goal of the NIST grants was to create a cooperative system of providing environmental assistance to industry at the state level utilizing the regulatory personnel, environmental service providers and the NIST centers. The activities to be carried out under the project funding were the same for all the states:

- Convene service providers, state assistance organizations and environmental programs.
- Identify environmental assistance needs of industry.
- Identify available environmental resources.
- Use the applicable programs and resources to develop a statewide system of environmental services.
- Implement the plan for 6 months.
- Identify needs to make the network work long term.

The grants ranged from \$51,000 to \$614,000 and were for 18 months, with up to one year in no-cost extensions. Ultimately, NIST hoped that such a network would create access to seamless, coordinated environmental technical assistance for the business community.

Of the four SBDC-pilot states that received these grants, two were recipients of SBA grants while the other two were the recipients of EPA funding.(See Table 9). Note that these grants were awarded in 1996, which was well after most of the states had been funded by SBA and EPA for environmental assistance in the SBDCs.

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<sup>20</sup> Sources of information for this section include: (a) interviews with Greg Waldrip, Environmental Projects Manager NIST on 11/15/00, Bill Boone, NIST 11/10/00, Kirstin Koepsel, TMAC on 11/8/00, Michael Bollinger, Business Manager, A.J Philpott Manufacturing Center on 11/28/00, Christopher Lynch, Director, Environmental Assistance, PA SBDC on 11/17/00, Peter Crawford, Director, Environmental Assistance, VT SBDC on 11/8/00 and (b) Final Report, Environmental Integration Project, prepared by Texas Manufacturing Assistance Center, 1996 NIST MEP Environmental Planning Grant Proposal from the state of Vermont, Collaboration Plan, Vermont Environmental Assistance Partnership, and Environmental Integration at MEPS: What Happened? Draft Report, by Kirsten Oldenburg, P2cP Consulting.

**Table 9: SBDC & NIST Grants**

STATE	NIST Grant	EPA Grant	SBA Grant
Iowa			X
Texas	X		X
Virginia	X		X
Wisconsin			X
Pennsylvania	X	X	
Vermont	X	X	

While the focus of this brief overview of the NIST planning grants is on how they contributed to the outcomes of the SBDC pilots, it is instructive to consider the overall results of these grants above and beyond their direct effect on the pilot projects-- i.e., within the larger context of some of NIST's own conclusions regarding the results from its planning grants:<sup>21</sup>

- It is essential to have a neutral, external third party to be facilitator for the planning of the networks. This external party must facilitate both the development of the mission and the mechanics of the network (i.e., how to handle referrals).
- Each member of the network must define its particular mission, core clientele and market segment. This leads to reduced competition among the members.
- Recognize that it takes 9-12 months for the various partners to know and trust one another. These networks cannot work unless they are given enough time.

#### **A. Vermont**<sup>22</sup>

Vermont Manufacturing Extension Center (VMEC) was awarded a NIST environmental planning grant in October 1996. VMEC used the grant funds to hire an independent facilitator to help create the Vermont Environmental Assistance Program (VEAP). VEAP is a coalition of

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<sup>21</sup> From an interview with Greg Waldrup, Environmental Projects Manager, NIST, on 11/13/00

<sup>22</sup> Sources of information for this section include: (a) interviews with Peter Crawford, Director of Environmental Assistance, SBDC on 11/8/00, Don Kelpinski, State Director, SBDC, on 11/6/00, and Gary Gulka, Chief, Waste Prevention Section, VT ANR on 11/6/00, and (b) 6 quarterly progress reports on the Interagency Cooperation Demonstration Project presented to Ed Weiler, EPA from Peter Crawford, VT SBDC.

environmental assistance providers that includes the Vermont Agency of Natural Resources (ANR), the SBDC, VMEC, and the Vermont Department of Economic Development. There is also a second tier of assistance providers, including organizations such as Vermont Businesses for Social Responsibility and trade organizations, which facilitates communications among all concerned parties. The core coalition of four environmental assistance providers meets monthly to discuss mutual issues concerning environmental service provision. Because of this cooperation, referrals are now provided by all members to the appropriate organizations without turf issues interfering. With VEAP in place, businesses get better environmental assistance and the state environmental agency gets better compliance. The Environmental Assistance Director for the SBDC feels strongly that having the independent facilitator involved in creating this network was one of the main reasons for its success.<sup>23</sup>

The formation of VEAP has helped the SBDC in continuing to build on the base established through EPA's grant to the SBDC. It has allowed the SBDC Director of Environmental Assistance to have free publicity for his program, and has enabled the SBDC to receive referrals from the other organizations in VEAP because of the mutual understanding by VEAP's participants of each other's roles and capabilities.

## **B. Virginia**<sup>24</sup>

The A.J. Philpott Manufacturing Center in Virginia was awarded a NIST environmental planning grant in September 1995 in the amount of \$327,000. The project ended in June 1998. The Center used the grant monies as follows:

- to conduct a needs assessment for environmental assistance,
- to provide environmental training for staff at the Center,
- to conduct seminars,
- to hire an environmental specialist, and
- to award P2 grants of \$7500 each to seven manufacturers to address environmental problems.

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<sup>23</sup> From an interview with Peter Crawford, SBDC on 11/8/00

<sup>24</sup> Sources of information for this section include: (a) interviews with: Michael Bollinger, Business Manager, A.J. Philpott Manufacturing Center, on 11/28/00, Bob Wilburn, State Director, SBDC, on 11/1/00, Larry Roberts, formerly with SBDC on 11/8/00, Jim Carroll, Director, Hampton Roads SBDC on 11/8/00, Marolyn Parsons, formerly Director of Environmental Assistance with SBDC in Wytheville on 11/1/00, Joanne Chance, Director of Environmental Assistance, SBDC on 11/10/00, Sharon Baxter, DEQ on 10/23/00, Bill Sarnecky, DEQ on 10/26/00 and 11/6/00, and Jay Tice, Director, MTC on 11/1/00 and (b) Quarterly Report, 2<sup>nd</sup> Quarter, 1996, Pollution Prevention Grant, submitted to Larry Roberts VA SBDC from Marolyn Parson, SBDC, 1996 Quarterly Report for SBDC of Hampton Roads, from Warren Snyder, SBDC to Larry Roberts, SBDC, Final Report of Virginia SBDC Network's Pollution Prevention (P2) Assistance Program submitted to Ed Weiler, EPA from Larry Roberts, SBDC.



The general response to the staff training was positive; staff members can now recognize issues requiring environmental assistance.<sup>25</sup> The Center had poor turnout at the seminars aimed at the small businesses despite several tries, and they believe that poor attendance is the result of two major factors. First, only a small percentage of small businesses feel concerns about environmental issues. Second, the Center felt that the results of the "needs assessment" survey were misleading. While businesses might respond to the survey that they "need" environmental assistance, this does not necessarily translate into a real interest in making use of environmental assistance services when they are available.<sup>26</sup>

These findings are not dissimilar from the experiences of the SBDC pollution prevention project under the SBA grant. The SBDCs had trouble generating interest in workshops and seminars despite marketing efforts. The Philpott Center eventually eliminated the environmental specialist position due to its inability to generate enough interest in environmental assistance.

Although the Philpott Center's ventures under the NIST grant were largely unsuccessful, the Center has continued to add environmental specialists to their 3<sup>rd</sup> party database for client referral and feel they have the ability to assist their clients with this information. This database is also available through the on-line Virginia Environmental Support Network (VESN) website, which was designed in collaboration with the Virginia Department of Environmental Quality.

This NIST environmental planning grant appears to have had no significant impact on the environmental assistance efforts of the SBDC in Virginia. In fact, none of the SBDC employees were aware of the grant's existence. However, the Philpott representative did say that the Center continues to make client referrals to the SBDC environmental assistance counselor in Wytheville, Virginia.

### **C. Texas<sup>27</sup>**

The Texas Manufacturing Assistance Center (TMAC) was awarded a NIST environmental planning grant in 1997 in order to create a coordinated environmental network fashioned to meet the needs of small- and medium-sized businesses throughout the state. Deliverables for the project included:

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<sup>25</sup> Information from "Environmental Integration at MEPS: What Happened?" By Kirsten Oldenburg (report provided by Philpott Center).

<sup>26</sup> Information from "Environmental Integration at MEPS: What Happened?" By Kirsten Oldenburg.

<sup>27</sup> Sources of information for this section include: (a) interviews with Bill Weddle, Director of Environmental Assistance, NT SBDC on 9/14/00 and 11/15/00, Liz Klimback, North Texas Director, SBDC on 9/14/00, Chad Cliburn, formerly Director of Environmental Assistance with SBDC on 10/30/00, Kristen Koepsel, TMAC on 11/8/00, David James, SBEA, TNRCC on 11/9/00, Kathy Ferland, formerly with SBEA, TNRCC on 11/6/00 and 11/9/00, Tamara Oatman, SBAP, TNRCC on 11/17/00, and Ken Zarker, SBEA, TNRCC on 10/25/00 and (b) Specialty Concept Paper, Environmental Specialty Center, By Bill Weddle, September 17, 1998.

- creating a needs assessment report,
- creating a directory of state environmental resources and capabilities,
- drafting a policies and procedures manual for integrating environmental assistance,
- finalizing operating policies and procedures,
- providing a final project report.

TMAC's first activities included conducting focus groups to determine the needs of Texas manufacturers and holding several small business environmental roundtables to identify the concerns and needs of the small businesses. TMAC created a Directory of State Environmental Resources and Capabilities which was to be posted on the internet, and which consisted of a matrix of service providers according to topics, location, fees, etc. They also drafted an operating plan, and developed a training curriculum for providers.

At the end of the project, TMAC concluded that including staff from the Texas Natural Resource Conservation Commission (TNRCC) on the site visits to clients was a negative factor, especially in more rural areas. TMAC also determined that they had a "mission to improve and expand manufacturing in Texas, not the delivery of environmental compliance assistance."<sup>28</sup> The TMAC representative no longer handles environmental assistance and provides referrals to the SBDC Director of Environmental Assistance. Ultimately, there was no organization willing to maintain the Environmental Resources and Capabilities Directory, and the initiative was shelved.

#### **D. Pennsylvania<sup>29</sup>**

The Southwest Pennsylvania Industrial Resource Center (SPIRC) received Pennsylvania's NIST environmental planning grant in 1997. SPIRC used the grant funding as seed money for developing an environmental assistance network in the state. Participants, in addition to SPIRC, include the Ben Franklin Technology Center, Manufacturers Resource Center, Northwestern Pennsylvania Industrial Resource Center, Manufacturer's Technology Center, Northeastern Pennsylvania Industrial Resource Center, the Electrotechnology Applications Center, ENVIROHELP, PennTAP, the Department of Environmental Protection (DEP), and Pennsylvania's SBDC. Initially, there were problems flowing from differing expectations among the participants regarding the appropriate focus for the group. For instance, DEP expected pollution prevention to be the core business area; other members, including the SBDC,

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<sup>28</sup> From TMAC's Final Report, Environmental Integration Project prepared for Texas Department of Economic Development, Texas Manufacturing Assistance Center on 11 November, 1998

<sup>29</sup> Sources of information for this section include: (a) interviews with Greg Higgins, State Director, SBDC on 11/18/00, Christopher Lynch, Director of Environmental Assistance, SBDC on 11/17/00, Meredith Hill, Director of Pollution Prevention Program, DEP on 11/7/00, Dana Stuller, Coordinator of PEAN, PennTAP on 11/6/00, Eric Summa, Office of Air, Radiation and Recycling, DEP on 11/6/00, and Greg Czarnecki, formerly ombudsman with SBAP, DEP on 11/7/00 and (c) TMAC's Final Report, Environmental Integration Project prepared for Texas Department of Economic Development, Texas Manufacturing Assistance Center on 11 November, 1998.

wanted to accept any client in need of environmental assistance for referral.<sup>30</sup> At the end of the 18-month grant life, communication among the members had so improved that DEP provided funding for the network to continue. At this time the network became known as the Pennsylvania Environmental Assistance Network (PEAN).

There is no formal agreement among PEAN members as to how they relate to each other. DEP has hired PennTAP to administer PEAN, and PennTAP has developed marketing materials and a website. Some members do not feel that PEAN has lived up to its potential as a networking and referral mechanism.

Significantly, the group has never reached a general consensus on PEAN's mission. Some would like to see it as a virtual organization; others want a good resource network for referrals.<sup>31</sup> SPIRC recently dropped out of the network after deciding not to offer environmental assistance any longer. In addition, the number of referrals has not been at the level members hoped for, and DEP has brought up questions about continuing the funding for PEAN.<sup>32</sup>

Arguably, the greatest benefit of the network seems to be as a forum for communication among its members. Moreover, PEAN has helped the SBDC in Pennsylvania by serving as a forum where the Director of Environmental Assistance for the SBDC was able to market the SBDC's environmental assistance capabilities to other environmental assistance providers in the state. It also helped the Director in establishing his credentials among counselors within the Pennsylvania SBDCs.

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<sup>30</sup> From an interview with Eric Summa, PA DEP on 11/6/00.

<sup>31</sup> From an interview with Christopher Lynch, SBDC, on 11/17/00.

<sup>32</sup> From an interview with Christopher Lynch, SBDC, on 11/17/00.

## Chapter 3

### LEGACY OF THE SBDC POLLUTION PREVENTION PILOT PROJECTS

In the period since the end of the grants, some of the SBDC environmental assistance programs have become a stronger component of SBDC operations or built expanding relationships with the other environmental assistance providers in their states. Others have languished, with only a few traces of the grant impacts. The sections below summarize these remaining or growing legacies of the SBDC pollution prevention pilot project grants.

#### A. Iowa<sup>33</sup>

The SBA pollution prevention grant made the directors of the local Iowa SBDCs more aware of environmental issues. The environmental training of the SBDC counselors raised their awareness and led to an increase in the number of referrals they made to IWRC.<sup>34</sup> There were some concerns at the Iowa Waste Reduction Center (IWRC) concerning the SBDC's commitment to the original project, and at least one of the managers at IWRC has since suggested that SBDC hire a coordinator to act as a liaison between the two agencies. The SBDC Director is considering this suggestion and may decide to hire this coordinator.

In a subsequent initiative, IWRC won Congressional support for funding of a "Compliance Alliance" through SBA. Funding for the Alliance is managed by the Iowa SBDC, which has subcontracts with IWRC, Nevada SBDC, and the San Antonio, Texas SBDC.<sup>35</sup> The approach of the Compliance Alliance is to create a blueprint for bringing all providers of compliance assistance to small business together in each of three areas—EPA regulations, OSHA regulations and IRS requirements. IWRC is the lead for the project for environmental technical assistance; Nevada SBDC is the lead for the OSHA component of the project; and San Antonio SBDC is the lead for the IRS component of the project. The project involves creating an "Alliance" of all business assistance providers in the state in a cooperative forum. After establishing the model for such cooperation in the original state for each component of the project, the lead agencies for each area are to help transfer the model to other states. IWRC is currently working with Kentucky, Nevada SBDC with Illinois, and San Antonio SBDC with several other states. Project leads from all of the programs meet together on a periodic basis. Under the Alliance, IWRC has made an effort to go beyond a discrete focus on environmental assistance—e.g., with seminars involving providers in all three areas.

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<sup>33</sup> Sources of information for this section include interviews with Ron Manning, State Director, SBDC on 11/10/00; Lyle Bowlin, formerly Director of Environmental Assistance with SBDC on 11/10/00; John Konefes, Director, IWRC 11/1/00; Christine Twait, Project Manager, IWRC, on 10/25/00, and Kevin Dick, Nevada SBDC, on 12/1/00.

<sup>34</sup> From an interview with Ron Manning, SBDC, on 11/10/00.

<sup>35</sup> There are four entirely separate SBDCs in Texas, each responsible for a region within the state. The San Antonio SBDC is responsible for the southwestern part of the state.

While the Iowa SBDC manages the funds for the Compliance Alliance project, its role in the environmental assistance component of the project remains limited. There has not been significant initiative within the SBDC for offering environmental assistance. According to the Director of the SBDC in Iowa, the SBDC doesn't want responsibility for environmental assistance, and would be interested instead in developing a better relationship with IWRC to coordinate referrals so that the small businesses will have access to the information they need.<sup>36</sup> Under the SBA grant, IWRC basically took control of the project and performed most of the work. Clearly, the IWRC's capabilities in environmental assistance exceed those in the SBDC, and an effective relationship between the two will be necessary for providing such assistance to the SBDC's clients. What has not yet emerged in the SBDC as the result of the SBA pilot or the Compliance Alliance projects is an individual with the responsibility (as, for example, in Vermont, Pennsylvania and Texas) for coordinating both outreach and services for such environmental assistance—both within Iowa's SBDC, and between the SBDC and IWRC.

## **B. Texas<sup>37</sup>**

The SBA grant to the North Texas Small Business Development Center (NTSBDC) brought the SBDC into the environmental arena, and resulted in the creation of the North Texas Environmental Assistance Center (NTEAC), which has remained, since the end of the grant, one of the specialty centers of the SBDC. A full-time environmental specialist carries out the work of NTEAC, focusing both on pollution prevention and environmental compliance services. NTEAC does not receive general financial support from NTSBDC, and must find its own grant support.

After the funding for the SBA grant ran out, OSHA assistance and ISO 14000 training and support were added to the menu of services available from NTEAC. NTEAC won an EPA grant under which it produced a video for electroplaters focusing on compliance and pollution prevention solutions; the video was intended for managers of metal finishing operations. The video highlights two different metal finishers in Texas, who also provided the narration. TNRCC supported NTEAC's work on the video, both helping to identify the metal finishers and writing the script. The Bill J. Priest Institute for Economic Development, which is co-located with NTSBDC at the Dallas County Community College, produced the video, and distributed it at workshops and through the Environmental Assistance Center.

Currently, the program has two grants from EPA—one for Environmental Justice Pollution Prevention, and the other from Region 6 for Pollution Prevention Incentives for States (PPIS). Both specifically focus on environmental accounting. In the last two years, under the Environmental Justice grant, small minority businesses were targeted in the core area of Dallas

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<sup>36</sup> From an interview with Ron Manning, SBDC, on 11/10/00

<sup>37</sup> Information from interviews with Bill Weddle, Director of Environmental Assistance, NTEAC and Liz Klimback, Director, NTSBDC on 9/14/00, Bill Weddle on 11/15/00, David James, SBEA, TNRCC, on 11/9/00, and Tamara Oatman, SBAP, TNRCC, on 11/16/00.

that meet President Clinton's definition of Enterprise Zones. Seminars on Pollution Prevention are also offered to clients. In addition, the environmental coordinator is providing P2 and environmental accounting training to the SBDC counselors in the 13 NTSBDC field offices.

While NTEAC scheduled several environmentally focused seminars for small businesses, there was little success in attracting large audiences. The Center achieved the most success by incorporating environmental assistance education into other SBDC seminars. With respect to direct assistance, NTEAC generally provides a small number of companies with in-depth assistance. Overall, this program is moving forward slowly, and exists as a direct result of the original SBA grant. With a stable funding base, the program could continue to grow.

### C. Virginia <sup>38</sup>

The legacy of the original SBA grant in Virginia is one environmental assistance counselor located in Wytheville. Environmental assistance is no longer offered in the Hampton Roads SBDC. In Wytheville, the environmental assistance counselor holds a part time position and continues to offer environmental assistance to SBDC clientele. She is housed at the Manufacturing Technology Center (MTC), and also gets referrals from them.

In early 2000, the SBDC director changed the focus of the environmental assistance offered from direct assistance to outreach and marketing statewide, due to a low demand for services. One part-time counselor provides assistance to the whole state, although the environmental assistance rendered is most often where the marketing efforts take place-- in the western part of the state. The counselor intensified marketing efforts in the spring by presenting the program at meetings all over the state, but reverted to direct assistance by the fall when the word got out. Most of her work involves regulatory assistance and compliance issues. She has been successful in hosting peer-to-peer lunches offering current OSHA and environmental speakers, and reports that attendance at the lunches has been increasing, with requests for assistance likewise increasing.<sup>39</sup>

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<sup>38</sup> Sources of information for this section includes: (a) interviews with: Bob Wilburn, State Director, SBDC, on 11/10/00, Larry Roberts, formerly with SBDC on 11/8/00, Jim Carroll, Director, Hampton Roads SBDC, on 11/8/00, Marolyn Parsons, formerly Environmental Assistance Counselor with SBDC, on 11/1/00, Joanne Chance, Environmental Assistance Counselor, SBDC, on 11/10/00, Sharon Baxter, DEQ, on 10/23/00, and Bill Sarnecky, DEQ on 1/26/00 and 11/6/00, and (b) [www.vesn.org](http://www.vesn.org), "The Small Business Development Center for Environmental Compliance and Regulatory Assistance at the Manufacturing Technology Center", a brochure printed by the Virginia Department of Business Assistance.

<sup>39</sup> Interview with Joanne Chance, SBDC on 11/10/00.

#### D. Wisconsin<sup>40</sup>

As previously noted, Wisconsin's response to the original SBA grant involved a unique joint response of the SBDC and the Solid and Hazardous Waste Education Center (SHWEC), both of which are part of the University of Wisconsin Extension service (UWEX). The project director, selected from SHWEC, worked out of the SBDC office. The focus of the project was on designing materials which could be useful to individual SBDC counselors in working with their clients—resulting in the creation of the “Small Business Waste Reduction Guide,” with sector-specific information on P2 opportunities and approaches for a wide range of the types of businesses which SBDC counselors normally encounter.

This original design has resulted in a range of follow-up activities, which comprise a continuing legacy of the original grant. First, the Guide continues to have a great deal of visibility. It is available on both SHWEC and US EPA websites. Over 25 states, the United Nations Environmental Program and other countries have requested copies. SHWEC has provided training based on the handbook not only to the SBDCs in Wisconsin, but to SBDCs in Missouri. The Guide is periodically updated, most recently in January 2000. Every SBDC in Wisconsin has a copy of the Waste Reduction Guide and the related videos.

Second, new direct SBDC assistance projects have emerged as a result of the continuing cooperative effort. In July 1999, the SBDC and SHWEC jointly received funds from EPA Region V (Chicago) to develop a process for incorporating pollution prevention education and assistance into the business counseling programs of the SBDC. Two SBDCs were selected as pilot project sites, LaCrosse and Green Bay, and business counselors were put in charge of the project at each site.

While both SBDCs targeted specific sectors, the models adopted for outreach and assistance at the two sites were significantly different. In Green Bay, the SBDC decided to focus on metal finishing and restaurant businesses, and mailed SBDC brochures to 59 businesses in each sector. Out of 118 companies sent the initial mailing, only two received direct contact and assistance from the SHWEC professionals. This low rate of success was the result of limited followup with the companies contacted and less perseverance than was needed.<sup>41</sup>

In LaCrosse, the team focused on the printing and lumber industries. The first half of the project was spent entirely on outreach to the printing companies. They conducted interviews with 13 different printers, with 3 cases of assistance provided, and then they mailed letters with a self assessment tool to printers in the area with 100% response due to followup procedures. One of the key elements for success was that the SBDC hired (part time) a consultant with printing

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<sup>40</sup> Sources of information for this section include interviews with Erica Kauten, State Director, SBDC (11/1/00); Tom Blewett, Project Manager, SHWEC (10/30/00); and Phil Kaplan, Project Officer, EPA Region 5 (11/6/00).

<sup>41</sup> From an interview with Phil Kaplan, EPA Region V on 11/6/00

industry experience, who participated in the active outreach and follow-up. The second half of the project in LaCrosse is dedicated to the lumber industry, and is due for completion in the spring of 2001. In both the projects in Green Bay and LaCrosse, the degree of followup to the initial contact seemed to be the determining factor in the project's success.

#### **E. Pennsylvania <sup>42</sup>**

The SBDC Pollution Prevention Pilot grant in Pennsylvania was completed in 1999. During the period of the grant, the SBDC had a single environmental coordinator whose main role was to build environmental awareness within the SBDC, and to develop a network of contacts with other environmental assistance providers. Since the conclusion of the grant, the SBDC has won \$1 million in direct funding from the Pennsylvania State Legislature for providing environmental assistance. The SBDC is in the process of hiring 6 environmental specialists in the field for direct environmental assistance. The SBDC has divided the state into 6 regions which closely mirror DEP's regional organization. One environmental specialist would be located in each region, and would serve 2-3 SBDC's.

The SBDC is trying to complement the activities of DEP by focusing on the smaller businesses that DEP does not traditionally target. When there was one SBDC environmental specialist in the state, the SBDC did not aggressively market direct assistance; but now the SBDC is in a position to market its new capabilities. In the first six weeks of having environmental specialists on board, the SBDC performed seven site assessments. Because the SBDC is aligning environmental assistance with the local SBDCs, it expects that 50% of client referrals will come from the local SBDCs to the environmental specialists. The program is growing, and seems to have both a growing network for services and a solid base of funding.

#### **F. Vermont <sup>43</sup>**

The environmental assistance component of the SBDC in Vermont has continued since the expiration of the grant, and it appears to be growing stronger. Although the SBDC has never directly funded environmental assistance, the program has been able to operate on funding received from other agencies—including the Vermont Agency of Natural Resources (ANR), the Upper Valley Compliance Network, EPA, and, until recently, the Retired Engineers and Professionals (REAP). Lack of a stable base of funds has been the biggest hurdle for the program to overcome. Much time has been spent on obtaining funding to continue the program

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<sup>42</sup> Sources of information for this section include interviews with Greg Higgins, State Director, PA SBDC on 11/18/00 and Christopher Lynch, Director of Environmental Assistance, PA SBDC on 11/17/00.

<sup>43</sup> Sources of information for this section include interviews with Don Kelpinski, State Director, SBDC, on 11/6/00, Peter Crawford, Director of Environmental Assistance, SBDC, on 10/25/00 and 11/8/00, and Gary Gulka, Chief, Waste Prevention Section, ANR, on 11/6/00.



that could otherwise have been spent on direct environmental assistance. In FY 99, there was a special earmark of EPA funds for this program through the Vermont Congressional delegation.

The SBDC in Vermont continues to fully support their environmental assistance program in all ways except financially. They consider it to be a valuable resource and an integral part of the SBDC.<sup>44</sup> On average, the program continues to receive 100-150 phone information requests annually, has conducted 13 workshops with 270 attendees, and has performed 20 environmental opportunities assessments.<sup>45</sup> The ANR and SBDC work closely on workshops, assessments and compliance. They are also partners in the Vermont Environmental Assistance Program (VEAP). According to both SBDC and ANR, they have a good working relationship, with only some very minor conflicts concerning compliance issues. Any conflict is eclipsed, however, by their continued cooperation and complementary work on providing environmental assistance.

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<sup>44</sup> From an interview with Don Kelpinski, SBDC on 11/1/00.

<sup>45</sup> From an interview with Peter Crawford, SBDC on 10/25/00

## Chapter 4

### LESSONS LEARNED FROM THE SBDC POLLUTION PREVENTION PILOT PROJECT GRANTS

While all SBDCs provide a range of basic services for small businesses, the SBDC pilot pollution prevention grants supported programs in six significantly different situations, which varied in terms of: (1) relationships with other environmental providers; (2) the internal management of the environmental assistance effort; (3) the size of the state (or at least of the area covered by the SBDC); and (4) the priority assigned to the environmental assistance effort. What lessons are there to take away from these pilots for future efforts? While the experiences of these pilots clearly do not add up to a single prescription for success, this evaluation nevertheless identified several factors which have a bearing on the success of current and future programs:

- Organizational structure for the environmental assistance function within the SBDC
- Scope and intensity of outreach
- Degree of collaboration with other existing environmental assistance providers, and
- Measurement of results

#### **Organizational Structure for the Environmental Assistance Function Within the SBDC**

- *Leadership for the Environmental Assistance Role in the SBDC*

Four of the six SBDCs designated a **single individual with responsibility for managing the project for the entire state** (or, in the case of NTSBDC, the entire region). It was that individual's responsibility to design the program, promote the involvement of the regional SBDC directors and the SBDC counselors in the environmental assistance project, and build connections with other environmental assistance providers in the state. Three of those cases (PA, VT, TX) involved new positions in the SBDC created specifically for the purpose of the project. In all three cases, even though the projects are over, the programs are an active and growing part of the SBDCs today. In Wisconsin, the SBDC took the unusual step of choosing a manager from the state's pollution prevention technical assistance program (SHWEC), who worked out of the SBDC offices; this arrangement provided clear leadership for the program and a strengthened relationship between SHWEC and SBDC that led to an effective mutual redesign of the project at start-up. But the SBDC will eventually need to address the issue again if the current SHWEC coordinator moves to another position. In the two states where there was no clear statewide leader (VA, IA), the SBDC had more difficulty in increasing capabilities or developing a clear longer-term role.

- *Designing Environmental Assistance Efforts Within the SBDC*

Participants in all six states discussed both the challenge of gaining the involvement of SBDC counselors, and the benefits of the strong client base of the SBDCs. There were a number of experiments with how to best use the capabilities of the SBDCs and work effectively with counselors on environmental assistance. Approaches which seemed effective involved, in various combinations, **careful design of materials to be useful to counselors, training of counselors, and working to build environmental assistance as a module in the regular programs and services of the SBDC** (with the active involvement of the environmental assistance specialist).

SBDC counselors typically focus on common issues of business development and finance; environmental issues have not generally been a part of their focus. During the interviews for this review, we heard numbers as low as 3-5% for the percentage of the environmental assistance work based on referrals from counselors. One of the challenges faced in many of the pilot projects was getting the attention and support of those counselors, and of determining what their role could be in the environmental assistance effort.

Wisconsin worked to bridge the gap between the counselors' usual experience and their potential environmental assistance role by developing a guidebook focused less on those industrial sectors usually targeted for pollution prevention technical assistance, and more on the range of sectors represented by the typical SBDC clients. And several states put substantial effort into providing environmental training for the counselors. But even then, it did not work to simply assume that the counselors would generally become advocates of environmental or pollution prevention concerns. (A parallel situation exists in regulatory agencies, where P2 training for inspectors has not, by itself, generally resulted in subsequent significant P2 efforts by inspectors).

What did seem to work more effectively were attempts to **integrate the efforts of the environmental assistance specialists into the regular functions of the counselors** —e.g., environmental assistance meetings as a part of the regular business development sessions, particularly when supported by integrated environmental modules and training. With its new funding and positions, Pennsylvania's SBDC is locating its environmental assistance counselors to work closely with a small number of area SBDCs, and is hoping that referrals from other SBDC counselors will make up as much as 50% of their workload; once under way, this will be a useful approach to examine.

## **Scope and Intensity of Outreach**

"If you build it, they will come" may be the marketing dream, but it was not the experience of the environmental assistance pilots. **The keys for the most successful outreach efforts in the pilot projects or subsequent follow-ons were targeting and extensive follow-up.** Both sector targeting and effective outreach and followup methods were critical to effective programs.

- *Targeting*

Since not all small businesses have a major interest in environmental issues, careful targeting was critical, involving issues of sector, timing, and "hook." Most of the pilots began with plans for focusing on specific sectors. The key was to identify those sectors for which there were prevention opportunities, the timing was opportune for considering prevention, and which were populated by the types of companies generally serviced by the SBDCs. The importance of a sector-specific focus was that it allowed **targeting on the particular operational and financial issues of concern to a specific set of businesses and provided the potential for turning "environmental" issues into business and profitability issues of greater relevance to the usual focus of SBDC counselors.**

- *Customer Orientation*

While the focus of the grants was on pollution prevention, most of the SBDCs related that their clients requested and needed help with compliance issues. They found that they could **address pollution prevention most effectively in the context of compliance assistance.** One of the reasons that stand-alone pollution prevention workshops seemed to be universally unsuccessful is that the small businesses weren't interested in pollution prevention. Clients would come more frequently to workshops and conferences where pollution prevention was just one of the topics explored. Efforts by the North Texas SBDC to assist dry cleaners in both pollution prevention and compliance were successful (with over 200 clients) because the dry cleaners were already past the compliance deadline for new regulatory requirements. The other timing **opportunity, in addition to immediate compliance concerns, appeared to be at business start-up;** several environmental assistance counselors worked to integrate their message into the early work of SBDCs with new companies.

- *The Importance of Active Followup*

Some outreach strategies were effective; others simply didn't work. Among the oft-tried ones that didn't (or, at best, on which there is no evidence of success): direct mailings with limited follow-up and stand-alone seminars or workshops. An extremely high percentage of such workshops had to be cancelled, and attendance at those held was often startlingly low (five of the nine that weren't cancelled in eastern Virginia had no attendees). In one case, an SBDC put a pilot on public television and assumed that there was a significant number of viewers (as opposed, for example, to more successful efforts which used video-training with downlink sites with defined audiences—sometimes interactive). Hands-on intensive efforts were more successful—e.g., participation and availability of environmental assistance specialists at SBDC business start-up workshops, work with local business associations, or phone outreach by knowledgeable specialists.

To reiterate, the outreach strategies that seemed to work the best involved both **targeting and active follow-up.** Perhaps the contrasting experiences of post-pilot efforts by two Wisconsin SBDC's best illustrate this point. Both targeted on a sectoral basis. One conducted a mass

mailing to its targeted industry and followed up with phone calls. This led to a small number of face-to-face interviews; out of 118 businesses contacted, there were two businesses that received direct contact and assistance about waste management. The second SBDC hired (part-time) someone from the sector to guide the effort, phoned prospective clients for interviews and got 100% response. The SBDC developed targeted outreach based on the lessons from those interviews, mailed all the businesses self-assessment tools, did extensive follow-up, and offered to provide assistance. Sixty-four percent of the businesses requested the assistance. This more intensive approach led to a significantly higher degree of success in client outreach.

## **Degree of Collaboration with Other Existing Environmental Assistance Providers**

The SBDCs have the benefit of a wide business audience which turns to them for **business assistance**. These relationships provide the potential for a beneficial for the SBDCs in increasing the business community's awareness of environmental requirements and opportunities.

The caveat, however, is that **environmental assistance** isn't a natural concern of many of the counselors. Without some added capabilities, the results of a nominal environmental assistance program may be hard to find. **The pilots demonstrate that environmental assistance works best in SBDCs when the SBDCs have at least some level of environmental capabilities.** Without this capability, counselors are not in the position to make informed environmentally related referrals. But what level of knowledge or expertise is required? Some SBDCs may be able to make major financial investments in environmental assistance specialists (as in Pennsylvania), so that the SBDC has extensive independent environmental assistance capabilities which don't require significant changes in the current roles of the other counselors. But in most states this model is not a short-term option due to the cost and commitment required to make it work. The pilots indicate, however, that the Pennsylvania model isn't a requirement for a useful SBDC environmental assistance role. With even minimal environmental capabilities, SBDC's can offer "threshold" environmental assistance for relatively minor problems and informed referrals for significant or complex problems.

Regardless of the resources available to the SBDCs for environmental assistance, many of the state P2 technical assistance programs have in-depth technical expertise and experience working with a range of industry sectors—especially those generally known to be significant polluters. For the SBDCs to be effective in providing environmental assistance, the pilots do not provide a rationale for the SBDCs to replicate those capabilities. Rather, **one of the lessons from the pilots would seem to be that a cooperative relationship that recognizes and utilizes the services of all organizations capable of offering environmental assistance can be highly beneficial.**

The specific roles of SBDCs and other environmental assistance providers are certain to vary from state to state, as they have for the non-SBDC assistance providers. What the pilots

demonstrate is the benefit of strong cooperative efforts and networks of providers which build on the strengths of each party. Two of the best examples of cooperation involved very different state settings and totally different models.

In Vermont, the parties took the time to evaluate their respective roles and define how best to work with each other. The close cooperation was assisted by the relatively small state setting in which people all knew each other (though that isn't an inevitable outcome of proximity). The NIST planning grant seems to have provided a mechanism for assessing the best mix of roles for all participants. The perceived value of the SBDC is evident in the fact that, even though the SBDC was not able to provide support to continue the environmental assistance effort after the end of the grant, Vermont's regulatory agency provided funding for continued operation. This model may be applicable more broadly than in a small state like Vermont; the SBDC environmental assistance manager in Pennsylvania, who is matching the assignments of the new environmental assistance staff to the six DEP regions, agreed that creating six Vermont-like situations wouldn't be an unreasonable description of his goal.

In Wisconsin, a close working relationship was built into the design of the pilot project, with the project manager from the state's P2 technical assistance group working in the SBDC offices. In this case, the relationship was assisted by the fact that both organizations are part of the university extension service.

**Comprehensive planning, which provided an opportunity to take into account roles and capabilities, was a key factor to effective networking and cooperative relationships in several pilots.** Two of the NIST grants (PA and VT) seem to have served this purpose well. Wisconsin was able to accomplish it within the framework of a common organization. **Providing for such planning efforts would be an important design element to consider in future efforts.**

Clearly, the SBDCs are viewed positively by a sizable small-business audience, although a significant portion of this audience comprises sectors that pose only minor environmental concerns. Key to this positive image is *trust*, based upon an understanding that the SBDC-client relationship is grounded in confidentiality. In view of this relationship of trust, many have viewed the SBDCs as a natural and logical conduit for delivering environmental assistance to small businesses by integrating environmental principles and practices into standard business planning assistance. As noted previously, much of the SBDC client base raises only minor environmental concerns; and at the same time however, existing environmental assistance programs have developed working relationships with many of those sectors generally seen to be significant polluters. But there is no necessary conflict here; the reality in the field is that the client bases of these respective groups are sufficiently different that there is room for all, and the major challenge for those who allocate public funding for environmental assistance is to play to the strengths of the respective organizations.

## Measurement of Results

**One of the limitations for ascertaining just what the pilot projects accomplished was the extent and type of measurement.** Most of the SBDCs measured the success of their outreach by counting the number of attendees at different functions, or the number of times they conducted direct assistance, but few of them had a formal followup system to evaluate the impact of the assistance on the clients. There is no question that numbers of attendees and number of on-site assessments are useful figures that are important in evaluating the pilots. But to really determine what works, more attention is needed to measuring results. In Iowa, IWRC has a long-standing approach to assessing outcomes, by revisiting facilities where site assessments have been done at regular intervals; the work on the pilot project was basically assimilated into that evaluation system.<sup>46</sup> But elsewhere, there does not appear to have been any systematic measurement of impacts.

There were two major obstacles to such measurement under the pilot projects—duration and funding. These projects were start-up efforts, and the initial funding was mostly for one year. Since changes resulting from an assessment are often not immediate, it's extremely difficult to get a project up and running and to be in a position to assess results in that kind of time-period. **But for future development of programs involving the SBDCs, it would be important to focus on assessment of results, in order to be sure that expenditures are targeted on efforts that are likely to achieve the greatest benefit.**

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<sup>46</sup>The IWRC's standard followup procedures are as follows: Within one month after the initial contact, a qualitative evaluation is sent out to the business. Results from this are entered into the database. Six months after initial contact, IWRC follows up with a phone call to address recommendations that were implemented and this information is entered into the database. IWRC has not separately analyzed data for businesses contacted as part of the effort supported by this pilot-project grant.